NOKIA FX71L1

MODEL

SERVICE MANUAL

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DOLBY SURROUND
PRO • LOGIC

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(GB)

SAFETY REGULATIONS:

Service and repair work must be performed only in accordance with existing safety regulations !

⚠ Safety components in accordance with existing regulations. These components must be replaced only with original parts.

X-RAY REGULATIONS:

The picture tube type and the maximum permissible high-voltage ensure that the X-ray intensity of the receiver remains far below the permissible value. The high-voltage must not exceed 30 kV.

The high voltage is within the permissible limits when the operating voltage of the horizontal deflection stage equals 145 V (25", 28"), 140 V (29") at the minimum beam current. In servicing, check and adjust this voltage to the nominal value with Ro45.

(D)

SICHERHEITSBESTIMMUNGEN:

Bei Reparaturen gültige Sicherheitsvorschriften beachten !

⚠ Sicherheitsbauteil im Sinn der Sicherheitsbestimmung. Diese Teile dürfen nur durch Originalteile ersetzt werden.

RÖNTGENVERORDNUNG:

Die in der Röntgenverordnung festgelegte Ortsdosisleistung ist bei diesem Gerät durch die Bildröhrentype und die maximal zulässige Hochspannung gewährleistet. Die Hochspannung darf maximal 30 kV betragen. Dei hochspannung liegt im zulässigen Bereich, wenn die Betriebsspannung der Horizontal-Ablenkungstufe bei minimalen Strahlstrom 145 V (25", 28"), 140 V (29") beträgt. Bei Reparaturen ist die Spannung zu überprüfen und gegebenenfalls mit Ro45 auf Sollwert einzustellen.

(S)

SÄKERHETS DIREKTIV:

Gällande säkerhetsdirektiv måste beaktas vid service-ingrepp!

⚠ Skyddskomponenter. Dessa komponenter får endast ersättas med original reservdelar.

RÖNTGENSTRÅLNING:

Med hjälp av bildrörstyp och begränsning av maximum högspänning kan mottagarens röntgenstrålning säkras under tillåten nivå. Högspänningen får inte överskrida 30kV. Högspänningen är inom tillåten nivå när horisontalslut-stegets drivspänning är 145 V (25", 28"), 140 V (29") med minimum strålström. Kontrollera och ställ in spänningen till dess nominella värde med Ro45.

(F)

CONSIGNES DE SECURITE:

Veuillez observer les prescriptions de sécurité en viguer lors de dépannage !

⚠ Composant de sécurité conformément aux reglementations de sécurité. Ces composants doivent être uniquement remplacés par des piéces d'origines.

REGLEMENTATIONS RELATIVES AUX RAYONS X:

Le type de tube image et le maximum de haute tension assure que l'intensité des rayons X emis, pour ce recepteur, sont bien en dessous des valeurs admissibles. La haute tension ne doit pas dépasser 30kV. La haute tension de l'etrage de déviation horizontale est egale à 145 V (25", 28"), 140 V (29") pour un minimum de courant de faisceau. Vérifier et régler, en mode service, cette tension à l'aide de Ro45.

(I)

REGOLAMENTI DI SICUREZZA:

Osservare le norme di sicurezza vigenti in caso di reperazioni !

⚠ Componenti di sicurezza ai sensi del regolamento di sicurezza. Queste componenti devono venir sostituite unicamente con parti originali.

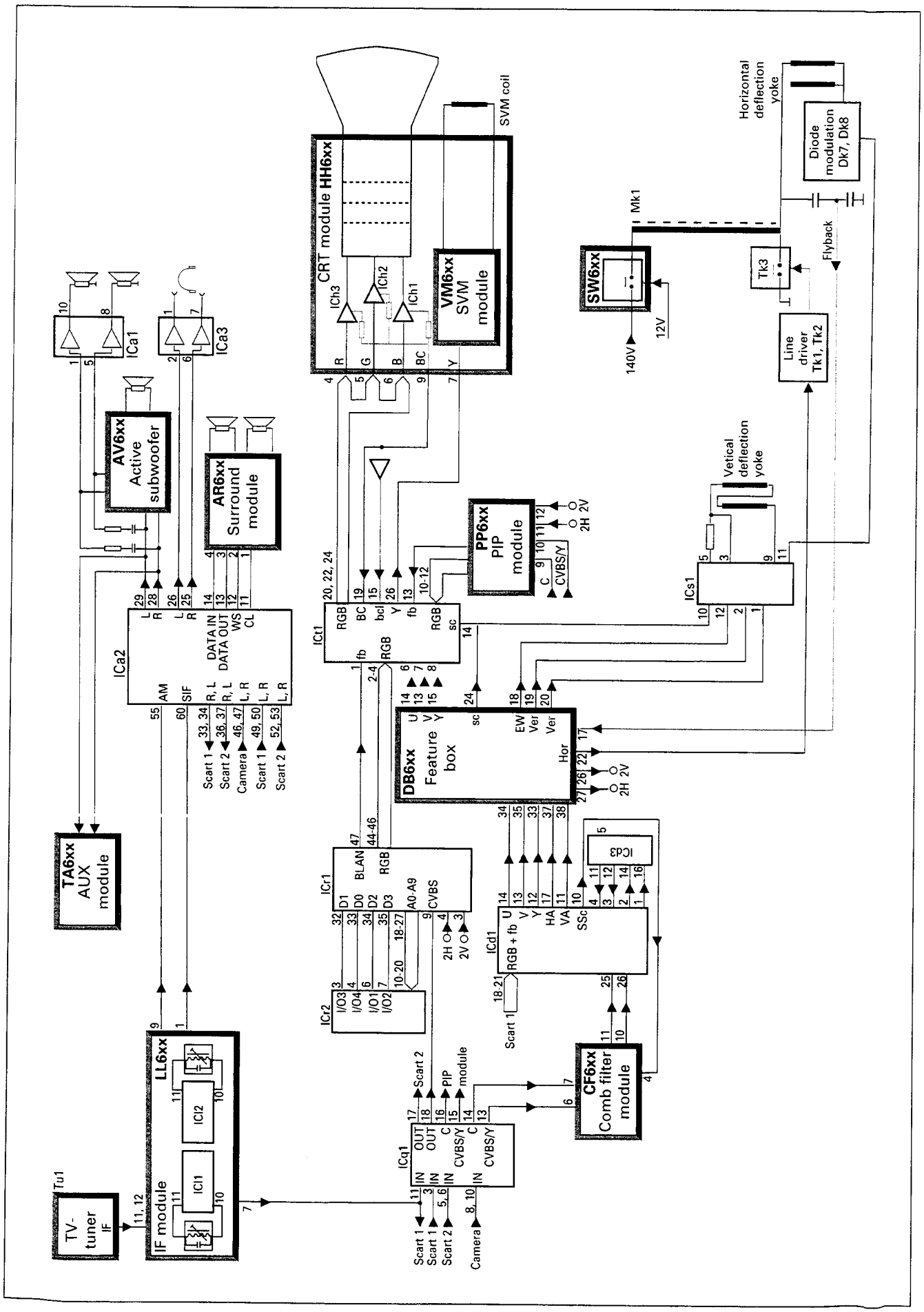
REGOLAMENTAZIONE DEI RAGGI-X:

Il tipo di cinescopio impiegato e l' uttilizzo dalla massima tensione anodica permessa, assicurano che l' intensita dei raggi-X emessi dal televisore siano abbondantemente al di sotto dei valori permessi. La tensine anodica non deve eccedere i 30 kV. La tensione anodica è all' intemo dei limitti stabiliti quando la tensione di lavoro dello stadio di deflessione orizzontale è di 145V per i 25", 28" e 140 V per i 29". Tali misure devono essere effettuate con la corrente di raggio al minimo. In caso di intervento, controllare tale tensione ed eventualmente regolaria con il trimmer Ro45.

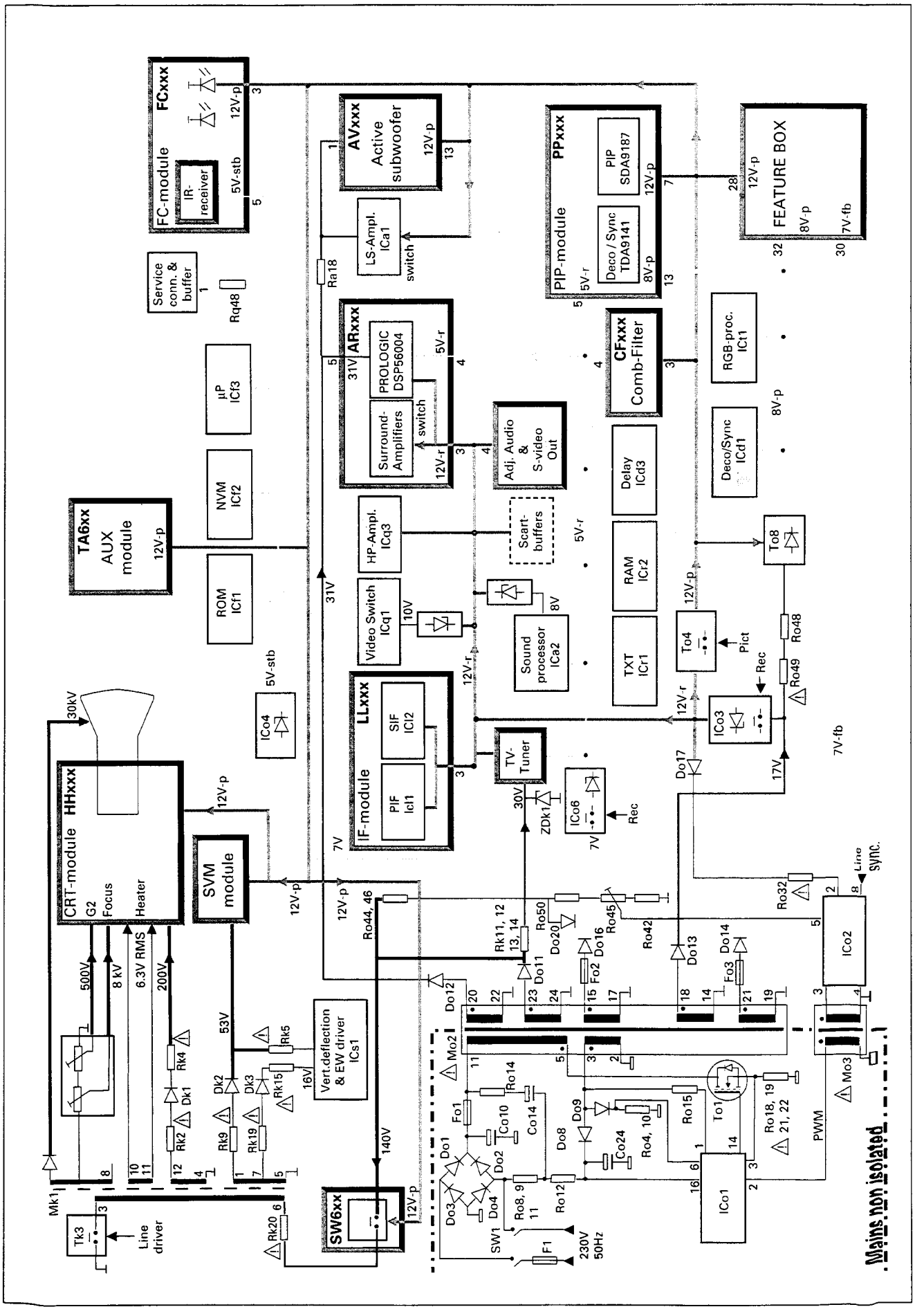
TECHNICAL DATA	TECHNISCHE DATEN	TEKNISKA DATA	
Mains power	Netzanschluß	Nätanslutning	230 V (-10% ... +6%), 50 Hz
Power consumption: Stand by Average (Depends on accessories)	Leistungsaufnahme: Stand by Im Mittel (Von der Ausstattung abhängig)	Effektförbrukning: Stand by I medeltal (Beroende på utrustning)	 Max.6 W 145 W
Picture tube	Bildröhre	Bildrör	25", 28", 29" 29" dyn. focus
Programme memory locations	Vorwählbare Kanäle	Antal programplatser	99
AV memory locations	AV-Speicherplätze	Antal AV-programplatser	3
Sound output Internal subwoofer Dolby Surround: Surround channel Centre channel	Ton-Endstufe Inner subwoofer Dolby Surround: Surround-Kanäle Mittel-Kanäle	Ljudeffekt Inbyggd subwoofer Dolby Surround: Surround-Kanal Center-Kanal	2 x 12 W (8 Ω) 14 W (16 Ω) 2 x 6 W (8 Ω) 6 Ω
Chassis: Mains isolated Digital controlled 100Hz Connections On the front panel 3 x chinch	Ausstattung: Netzisolerd Digitalkontrolliert 100Hz Anschlüsse Auf der Frontplatte 3 x chinch	Chassi Nätsisolerad Digitalstyrt 100Hz Anslutningar På framsidan 3 x chinch	 Audio in 0,5 V / 10 kΩ Video in 1 V / 75 Ω Y / C in (S-VHS)
Headphones	Kopfhöreranschluß	Anslutning för hörlurar	3,5 mm / 8 ... 600 Ω
On the rear panel SCART E2	Auf der Rückwand SCART E2	På baksidan SCART E2	 Audio out 0,5 V / 1 kΩ Audio in 0,5 V / 10 kΩ Video out 1 V / 75 Ω Video in 1 V / 75 Ω Y / C in (S-VHS)
SCART E1	SCART E1	SCART E1	Audio out 0,5 V / 1 kΩ Audio in 0,5 V / 10 kΩ Video out 1 V / 75 Ω Video in 1 V / 75 Ω RGB in 0,7 V / 75 Ω
Extra loudspeakers	Zusatzlautsprecher	Extra högtalaranslutning	2 x DIN
Aerial	Antenneneingang	Antennanslutning	75 Ω
Specifications subject to change	**Änderungen vorbehalten**	**Rätt till ändringar förbehålles**	

DATI TECHNICI	DONNEES TECHNIQUES	
Tensio do rete	Branchement secteur	230 V (-10% ... +6%), 50 Hz
Consumo di energi: Stand by In media (Dipendere da accessorio)	Puissance de consommation: Stand by En moyenne (Dépandant des accessoires)	 Max. 6 W 145 W
Tubo a raggi catodici	Tube image	25", 28", 29" 29" dyn. focus
Locazioni di memoria	Présélections	99
Locazioni di memoria AV	Memoires AV	3
Potenza audio in uscita Subwoofer interno Dolby Surround: Surround canaux Central canaux	Puissance de sortie son Subwoofer interne Dolby Surrond: Surround canali Center canali	2 x 12 W (8 Ω) 14 W (16 Ω) 2 x 6 W (8 Ω) 6 W
Chassi: Rete isolata Digitalmente controllata 100Hz Collegamenti Frontali 3 x chinch	Chassis: Isolé Avec contrôle numérique 100Hz Cablage Prises avants 3 x chinch	 Audio in 0,5 V / 10 kΩ Video in 1 V / 75Ω Y / C in (S-VHS)
Cuffie	Casque	3,5 mm / 8 ... 600 Ω
Posteriori SCART E2	Prises arrières SCART E2	 Audio out 0,5 V / 1 kΩ Audio in 0,5 V / 10 kΩ Video out 1 V / 75 Ω Video in 1 V / 75 Ω Y / C in (S-VHS)
SCART E1	SCART E1	Audio out 0,5 V / 1 kΩ Audio in 0,5 V / 10 kΩ Video out 1 V / 75 Ω Video in 1 V / 75 Ω RGB in 0,7 V / 75 Ω
Altoparlanti addizionale	Les haut-parleurs extérieur	2 x DIN
Ingresso per l'antenna	Antenne	75 Ω
Ci riserviamo il diritto di apportare modifiche ulteriori	**Sous réserve de modifications!**	

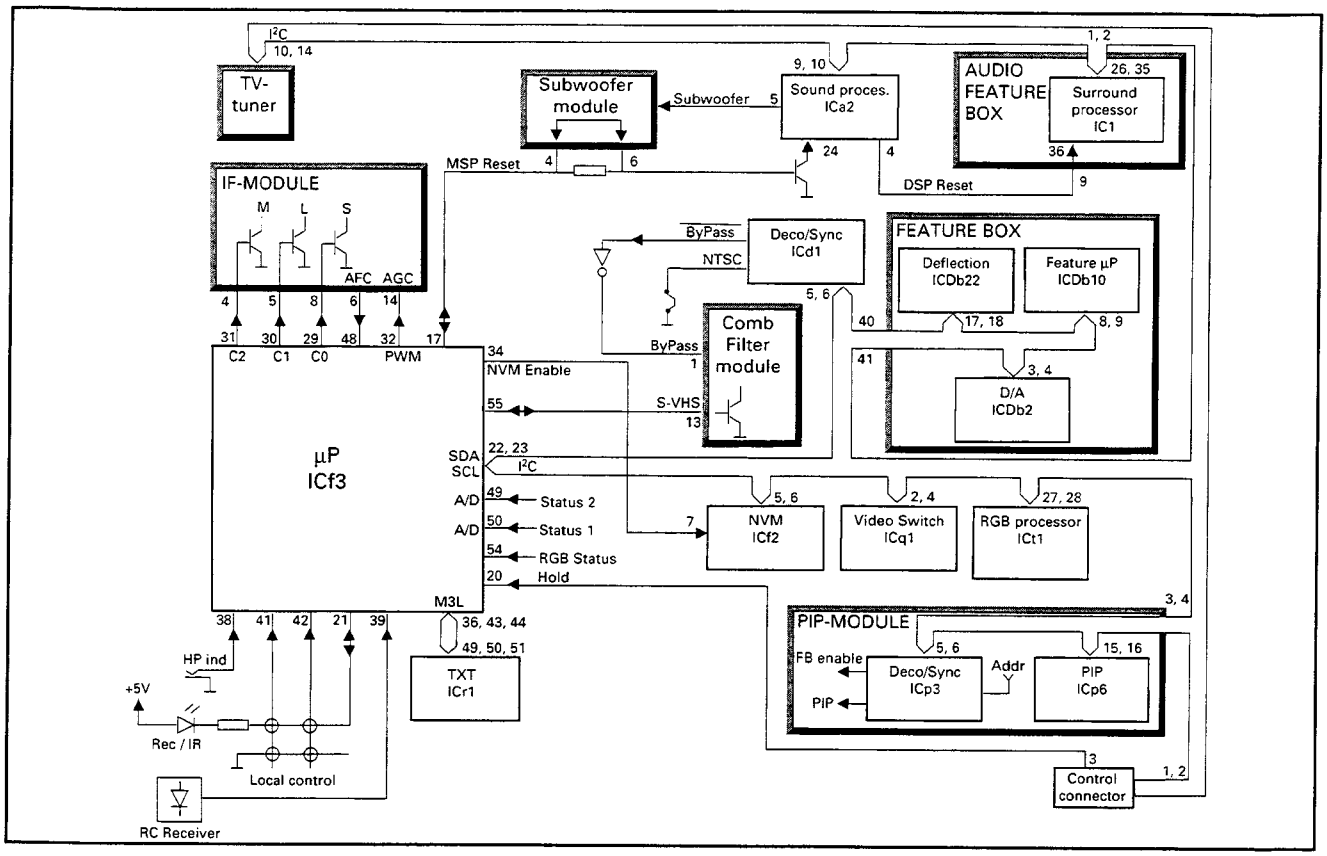
BLOCK DIAGRAM, SIGNAL ROUTES



BLOCK DIAGRAM, POWER SUPPLY



BLOCK DIAGRAM, CONTROL SIGNALS



SERVICE MODE SELECTION:

Switch on the receiver by pressing the mains switch and within 5 s. press the remote control buttons MENU, TV and "i" successively.

WAHL DES SERVICE-MODUS:

Einschalten Sie das Gerät mit dem Netzschalter und, innerhalb 5 Sekunden drücken Sie nacheinander die Fernbedienungstasten MENU, TV und "i".

VAL AV SERVICE-LÄGE:

Slå på mottagaren med huvudströmbrytaren och inom 5 s. tryck på fjärrkontrollens MENU-, TV- och "i"-knappar succesivt.

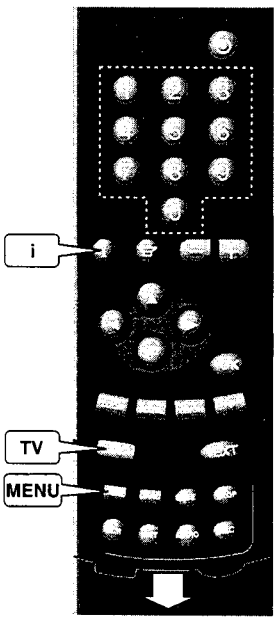
SELECTION DU MODE SERVICE:

Mettre le récepteur en marche à l'aide de l'interrupteur principal et dans les 5 secondes appuyez successivement sur les touches MENU, TV, et "i" de la télécommande.

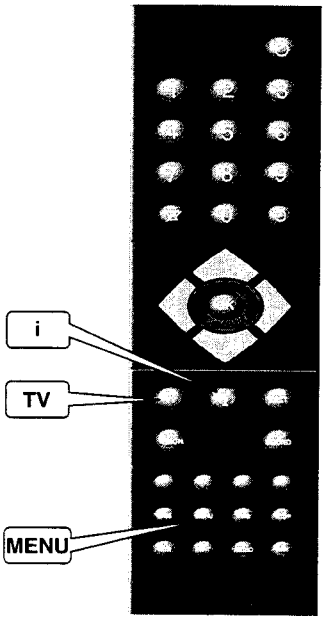
SELEZIONE DEL MODO SERVIZIO:

Accendere il ricevitore tramite l'interruttore generale e premere in sequenza i tasti del telecomando MENU, TV e "i" entro 5 secondi.

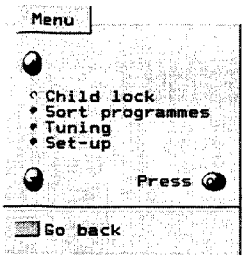
A menu

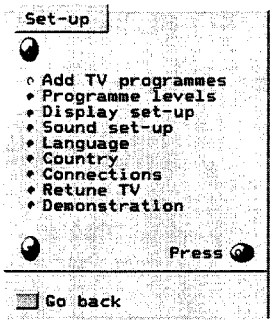


B menu



A menu





Language selection

1. Press the MENU button (under the lid).
2. Select the SET-UP with the cursor buttons (up-/downwards) and press the OK button.
3. Select the LANGUAGE and press the OK button.
4. Select the desired language and press the OK button.
5. Press the TV button to exit.

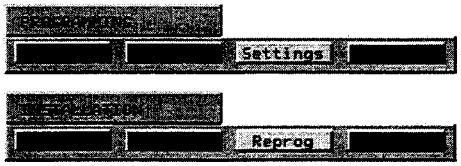
Manual tuning

1. Select programme number you want to tune.
2. Press the MENU button.
3. Select TUNING and press the OK button.
4. Press the red button (SEARCH).
5. Press the OK button to store.
6. Press the TV button to exit.

APSi (Automatic Programming System)

1. Press the MENU button.
2. Select SET-UP and press the OK button.
3. Select RETUNE TV and press the OK button.
4. To retune the channels, press the OK button.
5. Press the TV button to exit.

B menu



Language selection

1. Press the PRG button.
2. Select the Install by pressing the blue button.
3. Select the Language by pressing the red button.
4. Select the desired language with the cursor buttons and press the OK button.
5. Press the TV button to exit.

Manual tuning

1. Press the PRG button.
2. Press the red button (Tune).
3. Press the red button (Search).
4. Select the prog. number on which the channel is to be stored.
5. Press the blue button (Store) to store.
6. Press the TV button to exit.

APSi (Automatic Programming System)

1. Press the PRG button.
2. Press the blue button (Install).
3. Press the yellow button (Reprog).
4. Press the red button (APSi).
5. Press the green button (Reprog).
6. Press the blue button (OK) to exit.

NVRAM (ICf2)

Initialization of NVRAM

The NVRAM must be initialized and configured, if the NVRAM is replaced or it has totally lost its data. The next procedure is assuming that the tv does not start at all due to wrong data in NVRAM.

1. Set the receiver to the service mode by switching on the receiver with the main switch and within 5 s. pressing the buttons MENU, TV and "i" successively.
   Note! The receiver is in the service mode although it looks like the receiver is in stand-by mode!
2. Press the RED-button to pre-configurate the set. Green led will flash once to indicate this.

3a At the same time the controller will check NVRAM and initialize it automatically if it was "empty". Initializing will take about 15s. When it is completed, the green led will light up. continue from item 4.

3b The automatic initializing did not happen, if the green led does not light up steady. In some cases the led might also light up immediately after configuration without any initializing, depending on NVRAM contents. In this case it might be enough to to store the new configuration by pressing "OK" and continue from item 4.

3c If the automatic initializing did not happen, you can start it manually by entering the key code: BLUE (wait approx. 2s), 2, 5, 4 (wait approx. 2s) and OK. Initializing will take about 15s.

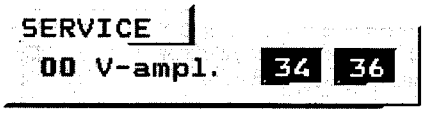
4. Switch off the receiver by pressing the mains switch.
5. Set the receiver to the service mode by switching on the receiver with the main switch and within 5 s. pressing the buttons MENU, TV and "i" successively. If the receiver remains in stand-by mode, press the TV button twice and then press the "i" button.
6. Configurate the receiver by pressing the RED button. The configuration menu will show up.
7. Press the OK button.
8. Press the TV-button and tune in one or more tv channels.
9. Return to service mode by pressing "i" button
10. After that make all of the service adjustments (see section "SERVICE ADJUSTMENTS VIA IIC BUS").
11. Switch off the receiver by pressing the mains switch.

SERVICE ADJUSTMENTS

SERVICE MODE SELECTION

1. The receiver is set to the service mode by switching on the receiver with the mains switch and within 5 seconds pressing the remote control buttons MENU, TV and "i" successively.

Note! If the receiver remains in stand by mode after selecting the service mode, switch on the receiver by pressing the TV button twice and select the service mode by pressing the "i" button.



In the service mode an adjustment menu (including the adjustment number and name, initializing (left) and adjustment (right)) values is shown on the screen.

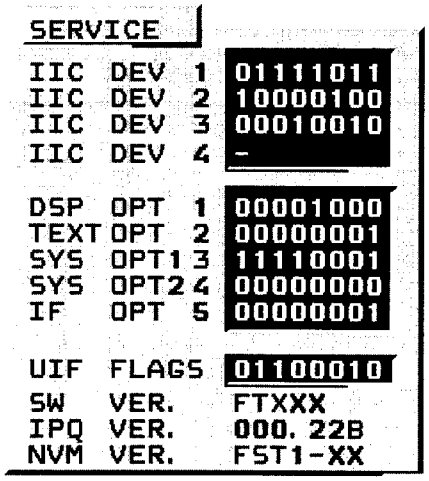
2. Return from the service mode by switching off the receiver with the mains switch.

CONFIGURATION AND FAULT DIAGNOSIS

The set must be configured after adding or removing some options. By pressing the RED button in the service mode, the processor checks all possible addresses of bus driven circuits and shows the settings on the screen.
This feature can also be used in fault finding; if an option bit is not '1' when it should be, the IC is either not present or faulty. In the configuration mode it is possible to enable/disable options for testing purposes.

Changing of option bytes

1. When in service mode, select the configuration mode by pressing the RED button.



Description
SW VER. = µP software version.
IPQ VER. = Feature box µP software version.
NVM VER. = NVM software version.

2. Select IIC Device byte 1 - 4 or Option byte 1 - 5 with the cursor button (up-/downwards). Selected byte is shown highligthed.
3. Set the bits with the number buttons (0 ... 7).
4. Store the settings by pressing the OK button.
5. Return to the service mode by pressing the RED button again.

OPTION BYTE DESCRIPTIONS

Bit	Description	Setting	'1'	'0'
		7 6 5 4 3 2 1 0		
		IIC DEV 1 01111011		
0	TV tuner		Yes	No
1	Decoder TDA9141		Yes	No
3	Feature box controller (IPQ)		Yes	No
4	Deflection controller TDA9151		Yes	No
5	RGB processor TDA4780		Yes	No
6	Video switch TDA6417		Yes	No
7	PIP controller SDA9188		Yes	No
		IIC DEV 2 10000100		
0	PIP tuner		Yes	No
2	Megatext SDA5273		Yes	No
7	MSP3400 / 3410		Yes	No
		IIC DEV 3 00010010		
0	DPL (AR600)		Yes	No
1	Subwoofer		Yes	No
4	Comb filter (SVHS line low)		Yes	No
6	DPL (AR602)		Yes	No
		DSP OPT 1 00001000		
0-2	Loudspeaker configuration (set in user mode)			
4	Bass splitting (normally yes, manual)		Yes	No
6	TV-speaker pre-equalisation (manual)		Yes	No
		TXT OPT 2 00000001		
0	TXT with external RAM		Yes	No
2	Flof text enabled (manual)		Yes	No
4	Text sync mode (manual)		Yes	No
5	Text subpage rolling (manual)		Yes	No
		SYS OPT 1 11110001		
0	Camera connector installed (manual)		Yes	No
3	RGB E1		Yes	No
4	NTSC 3.58 MHz		Yes	No
5	ACI enabled (manual)		Yes	No
6	NICAM enabled (manual)		Yes	No
7	Loudness enabled (manual)		Yes	No
		SYS OPT 2 00000000		
0	Start TV with mains		No	Yes
6	Start TV to demo mode (manual)		Yes	No
7	Hotel TV functions enabled (manual)		Yes	No
		IF OPT 5 00000001		
0	B/G system		Yes	No
1	I system		Yes	No
2	D/K system		Yes	No
3	L/L' system		Yes	No
5	Baseband		Yes	No
7	Only UHF tuner (manual)		Yes	No
		UIF FLAGS 01100010		
4	OEM option (manual)		Yes	No

SERVICE ADJUSTMENTS VIA IIC BUS

Remote control buttons in service mode

When the receiver is in service mode you can select the normal TV mode by pressing the TV button and return to the service mode by pressing the "i" button.
Number and cursor buttons are used for service adjustment. The yellow button hides temporarily the service menu. The OK button stores the settings.

Adjustment for different picture format

First make all adjustments with normal 4:3 picture format. The TV uses these adjustment values for all picture formats if no other adjustment were made. In each adjustment it is mentioned if the adjustment must be done separately for different picture format, repeate only those adjustments.

Making the service adjustment

1. Give a two numbered code which determines the adjustment (e.g. 05 = horizontal phase, see the following tables) with the number buttons.

Note! *The adjustments can also be selected with the cursor button (up-/downwards).*

2. Adjust with the cursor button (left/right).

3. Store the new value by pressing the OK button.

Note!

- *To avoid incomplete adjustments store each adjustment in the memory immediately after adjusting.*
- *If the adjustment has to be made separately for different picture format, select the normal user mode by pressing the TV button and change the picture format with the zoom button. Return to service mode by pressing the i button.*

VERTICAL PICTURE ADJUSTMENTS

Adjustment	Code	OSD name	Init. value	Note!
Vertical amplitude Vertical amplitude 16:9 Vertical amplitude 16:9 zoom	00	V-ampl.	34	Adjust the picture height to correct ratio. *Note! Separate adjustments for normal 4:3, normal 16:9 and 16:9 zoom picture format.*
Vertical off-centre shift	01	V-shift	4	
Vertical start scan	02	V-start	0	
Vertical S-correction Vertical S-correction 16:9 Vertical S-correction 16:9 zoom	03	S-corr.	49	*Note! Separate adjustments for normal 4:3, normal 16:9 and 16:9 zoom picture format.*
Vertical slope 4:3 zoom (coarse) Vertical slope 4:3 zoom (fine)	12 13	Zoom-H Zoom-L	71 0	Select 4:3 zoom picture format and adjust the picture to correct ratio.
Center value, 4:3 zoom shift (V-wait)	14	Shift	23	*Note! Before adjustment select 4:3 zoom picture format*

HORIZONTAL PICTURE ADJUSTMENTS

Adjustment	Code	OSD name	Init. value	Note!
EW width	04	Width	42	
Horizontal phase H-phase zoom H-phase RGB H-phase RGB zoom	05	H-shift	33	*Note! Separate adjustments for normal 4:3 and 4:3 zoom picture format.* *In addition make same adjustments by using RGB signal.*
EW parabola EW parabola 16:9 EW parabola 16:9 zoom	06	Parab.	24	*Note! Separate adjustments for normal 4:3, normal 16:9 and 16:9 zoom picture format.*
EW corner EW corner 16:9 EW corner 16:9 zoom	07	Corner	25	*Note! Separate adjustments for normal 4:3, normal 16:9 and 16:9 zoom picture format.*
EW trapezium EHT compensation	08 09	Trapezium EHT	5 6	Set brightness and contrast to 90% and compensate the change in picture size.

OTHER ADJUSTMENTS

Adjustment	Code	OSD name	Init. value	Note!
Red reference	20	R ref.	52	*Note! This procedure is necessary e.g. when the picture tube, CRT-module etc. has been replaced.*
Green reference	21	G ref.	21	*Apply a test picture and adjust the R, G and B references. Then adjust the R, G and B gains.*
Blue reference	22	B ref.	16	
Red gain	17	R gain	41	
Green gain	18	G gain	32	
Blue gain	19	B gain	32	
Clamp shift	11	Clamp	3	Normally no need to adjust.
Peak white limit	23	PWL	63	Normally no need to adjust.
Gamma correction	24	GAMMA	32	Normally no need to adjust.
Tuner AGC	25	TV AGC	170	Apply a 1 mV (60 dBµV) test signal. Adjust the picture just without noise.

SERVICE ADJUSTMENTS

O POWER SUPPLY BLOCK

Supply voltage and protection circuit

1. Set brightness and contrast to normal level. Connect a universal voltmeter to the cathode of Do11.
2. Adjust with Ro45 the DC voltage for +140 V (±1 V) or 145 V (±1 V) depending on the picture tube type, look at the schematic diagram.
3. Check the over-current protection after making any service operations in the primary circuit of the power supply. Set the receiver to the stand-by mode. Short circuit the cathode of Do 13 to the ground and keep the short circuit connected. When the over-current protection works correctly, the power supply will try to start 2-3 times before it stops definitely. Remove the short circuit and switch on the receiver by pressing the mains button.

K HORIZONTAL DEFLECTION BLOCK

Horizontal linearity

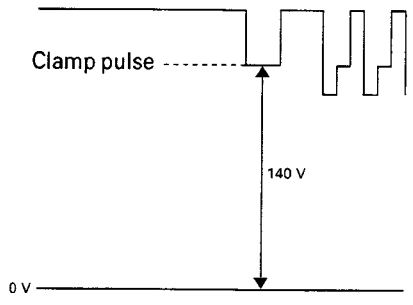
Adjust with Lk2.

Focusing

Set brightness and contrast to normal level. Use cross hatch pattern and adjust the picture for optimum resolution.

(Screen grid voltage) Ug2 voltage

1. Set contrast to minimum, brightness and colour saturation to normal level.
2. At the end of the vertical blanking, there is a black current measurement pulse (clamp pulse) at pin 9 of ICh1, ICh2 and ICh3. Use an oscilloscope and find the output stage with the highest cut-off (i.e. the highest voltage during the black current measurement pulse).
3. Adjust the voltage of the clamp pulse to +140 V with Ug2 (see figure).



LL PICTURE AND SOUND IF MODULE

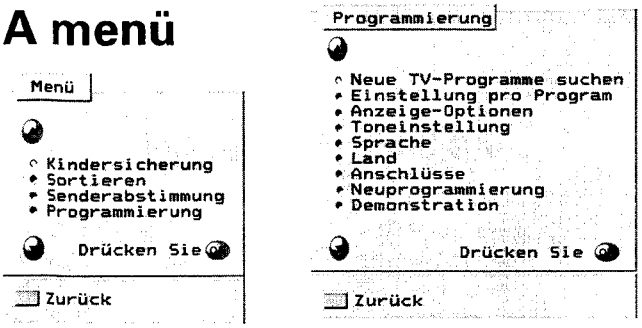
Video demodulator

1. Apply a test signal (1 mV = 60 dBµV).
2. Connect a universal voltmeter to the module connector X 1 pin 6.
3. Adjust with LI6 the DC voltage to the point where it changes from 0 to 5 V.

Sound demodulator

1. Apply a CCIR B/G standard (FM modulated sound) testsignal.
2. Connect a universal voltmeter to ICI1 pin 13.
3. Adjust with LI1 the DC voltage for +3.7 V.

A menü



Sprach Auswahl

1. Drücken Sie die Taste MENU.
2. Wählen Sie die Option PROGRAMMIERUNG durch Drücken der Cursor-Taste (auf-/abwärts) und drücken Sie die Taste OK.
3. Wählen Sie die Option SPRACHE und drücken Sie die Taste OK.
4. Wählen Sie die gewünschte Sprache und drücken Sie die Taste OK.
5. Drücken Sie die Taste TV.

Manuelle Abstimmung

1. Wählen Sie die Programm-Nummer, die Sie abstimmen wollen.
2. Drücken Sie die Taste MENU.
3. Wählen Sie die Option PROGRAMMIERUNG und drücken Sie die Taste OK.
4. Starten Sie den Kanalsuchlauf durch Drücken der roten Taste.
5. Die Speicherung erfolgt durch Drücken der Taste OK.
6. Durch Drücken der Taste TV kehren Sie zum normalen Fernsehempfang zurück.

APSi

1. Drücken Sie die Taste MENU.
2. Wählen Sie die Option PROGRAMMIERUNG und drücken Sie die Taste OK.
3. Wählen Sie die Option NEUPROGRAMMIERUNG und drücken Sie die Taste OK.
4. Starten Sie den Kanalsuchlauf durch Drücken der Taste OK.
5. Durch Drücken der Taste TV kehren Sie zum normalen Fernsehempfang zurück.

B menü

Sprach Auswahl

1. Drücken Sie die Taste PRG.
2. Wählen Sie Install. durch Drücken der blauen Taste.
3. Wählen Sie Sprache durch Drücken der roten Taste.
4. Wählen Sie die gewünschte Sprache mit der Cursor-Taste (auf-/abwärts) und drücken Sie die Taste OK.
5. Drücken Sie die Taste TV.

Manuelle Abstimmung

1. Drücken Sie die Taste PRG.
2. Drücken Sie die rote Taste (Abstimm.).
3. Drücken Sie die rote Taste (Suchen).
4. Wählen Sie die Pr. Nummer unter der neue Kanal abgespeichert werden soll.
5. Drücken Sie die blaue Taste (Speicher).
6. Durch Drücken der Taste TV kehren Sie zum normalen Fernsehempfang zurück.

APSi

1. Drücken Sie die Taste PRG.
2. Drücken Sie die blaue Taste (Install.).
3. Drücken Sie die gelbe Taste (Neueinst.).
4. Drücken Sie die rote Taste (APSi).
5. Drücken Sie die grüne Taste (Neueinst.).
6. Drücken Sie die blaue Taste (OK) zum Beenden.

NVRAM (ICf2)

Initialisierung des NVRAM

Der NVRAM muß nach Austausch oder bei Datenverlust initialisiert und konfiguriert werden. Die nachfolgende Beschreibung setzt voraus, daß der Fernseher auf Grund falscher Daten im NVRAM nicht eingeschaltet werden kann.

1. Bringen Sie den Empfänger in den ServiceModus, indem Sie nach dem Einschalten des Empfängers innerhalb von 5 Sekunden die Tasten MENU, TV und "i" nacheinander drücken. Hinweis! Der Empfänger befindet sich im ServiceModus auch wenn es so aussieht als ob er sich im Standby befindet.
2. Drücken Sie die rote Taste, um das Gerät vorzukonfigurieren. Dies wird Ihnen durch eine grüne, blinkende Leuchtdiode signalisiert.

3a. Gleichzeitig überprüft der Controller den NVRAM und initialisiert ihn automatisch, wenn er leer ist. Die Initialisierung dauert ungefähr 15 Sekunden. Nach erfolgreicher Initialisierung leuchtet die grüne Leuchtdiode ständig. Fahren Sie fort bei Schritt 4.

3b. Die automatische Initialisierung erfolgte nicht: Die grüne Leuchtdiode leuchtet nicht ständig. Es kann auch vorkommen, daß die Leuchtdiode sofort nach der Konfiguration aufleuchtet, ohne daß der NVRAM initialisiert wurde. Dies hängt ab vom Inhalt des NVRAMs. In diesem Fall könnte es ausreichen die neue Konfiguration mit "OK" zu speichern. Fahren Sie fort bei Schritt 4.

3c. Erfolgte keine automatische Initialisierung, so können Sie sie manuell starten. Drücken Sie hierzu zuerst die blaue Taste, warten Sie ca. 2 Sekunden, drücken Sie dann die Zifferntasten 2, 5 und 4, warten Sie erneut ca. 2 Sekunden und drücken Sie "OK". Die Initialisierung dauert ungefähr 15 Sekunden.

4. Schalten Sie das Gerät mit dem Netzschalter aus.
5. Bringen Sie den Empfänger in den ServiceModus, indem Sie nach dem Einschalten des Empfängers innerhalb von 5 Sekunden die Tasten MENU, TV und "i" nacheinander drücken. Bleibt der Empfänger im Standby, drücken Sie zweimal die TV-Taste und anschließend die i-Taste.
6. Konfigurieren Sie das Gerät durch Drücken der roten Taste. Das Konfigurationsmenü erscheint.
7. Drücken Sie die OK-Taste.
8. Drücken Sie die TV-Taste und stellen Sie ein oder mehrere Fernsehkanäle ein.
9. Kehren Sie durch drücken der i-Taste zum ServiceModus zurück.
10. Führen Sie danach die Service-Einstellungen durch (siehe Kapitel "SERVICE -EINSTELLUNGEN ÜBER IIC-BUS").
11. Schalten Sie das Gerät mit dem Netzschalter aus.

SERVICE-EINSTELLUNGEN

WAHL DES SERVICE-MODUS

1. Den Empfänger setzen Sie in den Service-Modus, indem Sie das Gerät mit dem Netzschalter einschalten und innerhalb von 5 Sekunden die Fernbedienungstasten MENU, TV und "i" nacheinander drücken.

Hinweis! Bleibt der Empfänger nach Wahl des Service-Modus in Betriebsbereitschaft, ist das Gerät einzuschalten, indem Sie die Taste TV zweimal drücken und den Service-Modus durch Drücken der Taste "i" bestätigen.

Im Service-Modus wird auf dem Bildschirm ein Einstellungsmenü mit den Werten von Initialisierung (links) und Einstellung (rechts) (einschließlich der Nummer und der Bezeichnung der Einstellung) angezeigt.

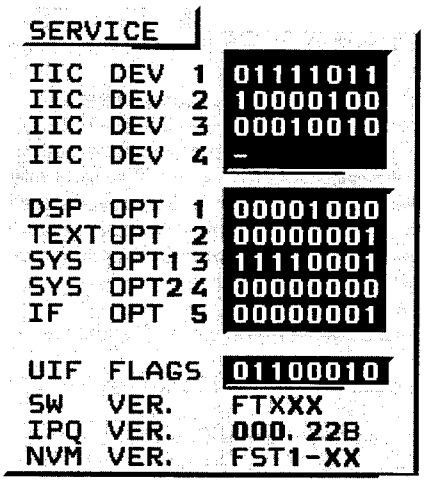
2. Den Service-Modus verlassen Sie, indem Sie den Empfänger mittels des Netzschalters ausschalten.

KONFIGURATION UND FEHLERDIAGNOSE

Das Gerät muß nach Einbau oder Ausbau einiger Features konfiguriert werden. Indem Sie die ROTE Taste im Service-Modus drücken, prüft der Prozessor alle möglichen Adressen der busgesteuerten Schaltkreise und zeigt die Einstellungen auf dem Bildschirm an.
Dieses Feature kann auch zur Fehlersuche genutzt werden: Wenn ein Option-Bit, das "1" sein sollte, nicht "1" ist, dann ist das entsprechende IC entweder nicht vorhanden oder defekt. Für Testzwecke ist es im Konfigurationsmodus möglich verschiedene Optionen ein- oder auszuschalten.

Änderung der Options-Bytes

1. Wählen Sie im Service-Modus den Konfigurationsmodus, indem Sie die ROTE Taste drücken.



Beschreibung
SW VER. = µP Software-Version.
IPQ VER. = Feature Box µP Software-Version.
NVM VER. = NVM Software-Version

2. Wählen Sie Byte 1 - 4 des IIC-Bausteins oder das Options-Byte 1 - 5 mit den Cursortasten (aufwärts/abwärts). Das gewählte Byte wird hervorgehoben.
3. Setzen Sie die Bits mit den Zifferntasten (0 ... 7).
4. Speichern Sie die Einstellungen durch Drücken der Taste OK ab.
5. Rufen Sie den Service-Modus durch erneutes Drücken der roten Taste auf.

BESCHREIBUNGEN DER OPTIONS-BYTES

Bit	Beschreibung	Einstellung	'1'	'0'
		7 6 5 4 3 2 1 0		
	IIC DEV 1	**01111011**		
0	TV-Tuner		Ja	Nein
1	Decoder TDA9141		Ja	Nein
3	Featurebox-Steuerung (IPQ)		Ja	Nein
4	Ablenk-Steuerung TDA9151		Ja	Nein
5	RGB-Prozessor TDA4780		Ja	Nein
6	Video-Schalter TDA6417		Ja	Nein
7	PIP-Steuerung SDA9188		Ja	Nein
	IIC DEV 2	**10000100**		
0	PIP-Tuner		Ja	Nein
2	Megatext SDA5273		Ja	Nein
7	MSP3400 / 3410		Ja	Nein
	IIC DEV 3	**00010010**		
0	DPL (AR600)		Ja	Nein
1	Subwoofer		Ja	Nein
4	Kamm-Filter (SVHS-Eingang aus)		Ja	Nein
6	DPL (AR602)		Ja	Nein
	DSP OPT 1	**00001000**		
0-2	Lautsprecher-Konfiguration (eingestellt im Benutzer-Modus)			
4	Bass-Splitting (manual)		Ja	Nein
6	DSP-Surround für Lautsprecher-Vorentzerrung (manual)		Ja	Nein
	TXT OPT 2	**00000001**		
0	TXT mit externen RAM		Ja	Nein
2	Flof-TXT aktiviert (manual)		Ja	Nein
4	Text sync (manual)		Ja	Nein
5	Durchlaufen von Textunterseiten (manual)		Ja	Nein
	SYS OPT 1	**11110001**		
0	Kamera-Eingang installiert (manual)		Ja	Nein
3	RGB E1		Ja	Nein
4	NTSC 3.58 MHz		Ja	Nein
5	ACI aktiviert (manual)		Ja	Nein
6	NICAM aktiviert (manual)		Ja	Nein
7	Loudness aktiviert (manual)		Ja	Nein
	SYS OPT 2	**00000000**		
0	Gerät mit dem Netzschalter einschalten		Nein	Ja
6	Aktiviert Demo-Modus beim Einschalten		Ja	Nein
7	Aktiviert Hotel-TV-Modus beim Einschalten		Ja	Nein
	IF OPT 5	**00000001**		
0	B/G-System		Ja	Nein
1	I-System		Ja	Nein
2	D/K-System		Ja	Nein
3	L/L'-System		Ja	Nein
5	Baseband		Ja	Nein
7	Nur UHF-Tuner		Ja	Nein
	UIF FLAGS	**01100010**		
4	OEM-Option		Ja	Nein

SERVICE-EINSTELLUNGEN ÜBER IIC-BUS

Fernbedienungstasten im Service-Modus

Befindet sich der Empfänger im Service-Modus, können Sie durch Drücken der Taste TV in den normalen TV-mode wechseln und zum Service-Modus durch Betätigen der Taste "i" zurückkehren.
Die Ziffern- und Cursortasten verwenden Sie für die Service-Einstellungen. Die gelbe Taste blendet das Service-Menü vorübergehend aus. Mit der Taste OK speichern Sie die Einstellungen ab.

Einstellung für verschiedene Bildformate

Nehmen Sie zunächst alle Einstellungen mit normalem 4:3 Bildformat vor. Das Fernsehgerät benutzt diese Einstellwerte für alle Bildformate, wenn keine anderen Einstellungen vorgenommen wurden. Bei jeder Einstellung ist angegeben, ob die Einstellung für ein anderes Bildschirmformat separat vorgenommen werden muß. Wiederholen Sie nur diese Einstellungen.

Service-Einstellung vornehmen

1. Geben Sie einen zweiziffrigen Code ein, mit dem die Einstellung festgelegt ist (z. B. 05 = horizontale Lage; siehe folgende Tabellen). Benutzen Sie dazu die Zifferntasten.

Hinweis! *Die Einstellungen können Sie auch mit den Cursortasten (aufwärts/abwärts) wählen.*

2. Nehmen Sie die Einstellungen mit den Cursortasten (links/rechts) vor.

3. Speichern Sie den neuen Wert durch Betätigung der Taste OK ab.

Hinweis!
- *Zur Vermeidung unvollständiger Einstellungen speichern Sie jede Einstellung sofort, nachdem diese vorgenommen wurde, ab.*
- *Sind die Einstellungen für unterschiedliche Bildformate separat vorzunehmen, wählen Sie den normalen TV-Modus, indem Sie die Taste TV drücken. Ändern Sie dann das Bildformat mit der Zoom-Taste. Nach Betätigung der Taste i gelangen Sie wieder in den Service-Modus.*

VERTIKALE BILDEINSTELLUNGEN

Einstellung	Code	OSD-Bezeichn.	Init. Wert	Hinweis!
Vertikale Amplitude Vertikale Amplitude 16:9 Vertikale Amplitude 16:9 Zoom	00	V-ampl.	34	Stellen Sie die Bildhöhe auf das richtige Verhältnis ein. *Hinweis! Separate Einstellungen für normales 4:3, normales 16:9 und 16:9 Zoom-Bildformat.*
Vertikale Lage	01	V-shift	4	
Vertikale Start-Zeile	02	V-start	0	
Vertikale Linearität Vertikale Linearität 16:9 Vertikale Linearität 16:9 zoom	03	S-corr.	49	*Hinweis! Separate Einstellungen für normales 4:3, normales 16:9 und 16:9 Zoom-Bildformat.*
Vertikale Steilheit 4:3 Zoom (grob)	12	Zoom-H	71	Wählen Sie das 4:3 Zoom-Bildformat und stellen Sie das
Vertikale Steilheit 4:3 Zoom (fein) Zentrierwert, 4:3 Zoom-Verschiebung (V-wait)	13 14	Zoom-L Shift	0 23	Bild auf das richtige Verhältnis ein. *Hinweis! Vor der Einstellung wählen Sie 4:3 Zoom-Bildformat.*

HORIZONTALE BILDEINSTELLUNGEN

Einstellung	Code	OSD-Bezeichn.	Init. Wert	Hinweis!
Bildbreite	04	Width	42	
Horizontale Lage Zoom H-Lage RGB H-Lage Zoom RGB H-Lage	05	H-shift	33	*Hinweis! Separate Einstellungen für normales 4:3 und 4:3 Zoom-Bildformat.* *Zusätzlich dieselben Einstellungen mit dem RGB-Signal vornehmen.*
OW-Kissen OW-Kissen 16:9 OW-Kissen 16:9 Zoom	06	Parab.	24	*Hinweis! Separate Einstellungen für normales 4:3, normales 16:9 und 16:9 Zoom-Bildformat.*
OW-Ecken Korrektur OW-Ecken Korrektur 16:9 OW-Ecken Korrektur 16:9 Zoom	07	Corner	25	*Hinweis! Separate Einstellungen für normales 4:3, normales 16:9 und 16:9 Zoom-Bildformat.*
OW-Trapez EHT-Kompensation	08 09	Trapezium EHT	5 6	Stellen Sie die Helligkeit und den Kontrast auf 90 % ein und kompensieren Sie die Änderung der Bildgröße.

WEITERE EINSTELLUNGEN

Einstellung	Code	OSD-Bezeichn.	Init. Wert	Hinweis!
Rot-Referenz	20	R ref.	52	*Hinweis! Dieser Abgleich wird erforderlich wenn z. B. die Bildröhre, die Bildröhrenplatte etc. gewechselt wurden. Testbild einspeisen und die R-, G- und B-Referenzwert einstellen. Danach die R-, G- und B-Verstärkung einstellen.*
Grün-Referenz	21	G ref.	21	
Blau-Referenz	22	B ref.	16	
Rotverstärkung	17	R gain	41	
Grünverstärkung	18	G gain	32	
Blauverstärkung	19	B gain	32	
Clamp-Shift	11	Clamp	3	Normalerweise keine Einstellung erforderlich.
Oberer Grenzwert weiß	23	PWL	63	Normalerweise keine Einstellung erforderlich.
Gamma-Korrektur	24	GAMMA	32	Normalerweise keine Einstellung erforderlich.
Tuner-AGC	25	TV AGC	170	Ein 1 mV (60 dBµV) Testsignal aufschalten. Bild ohne Rauschen einstellen.

SERVICE-EINSTELLUNGEN

O NETZTEIL

Versorgungsspannung und Schutzschaltung

1. Setzen Sie die Helligkeit und den Kontrast auf den normalen Pegel. Schließen Sie ein Universal-Voltmeter an die Kathode von Do11 an.
2. Stellen Sie Gleichspannung mit Ro45 auf +140 V (±1 V) oder +145 V (±1 V), je nach verwendeter Bildröhrentype (siehe Schaltbild), ein.
3. Nach Reparaturen am Primärkreis des Netzteils muß die Überstrom-Sicherung geprüft werden. Schalten Sie das Gerät in den Stand-by Modus. Schließen Sie die Kathode von Do13 nach Masse kurz. Wenn die Überstrom-Sicherung funktioniert, versucht das Netzteil 2-3 mal zu starten und schaltet dann endgültig ab. Entfernen Sie den Kurzschluß und schalten Sie das Gerät mit dem Netzschalter ein.

K HORIZONTALE ABLENKUNG

Horizontale Linearität

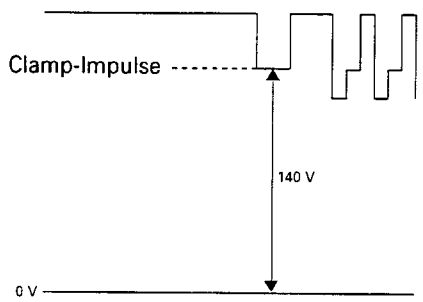
Mit Lk2 einstellen.

Fokussierung

Stellen Sie die Helligkeit und den Kontrast auf normalen Pegel ein. Stellen Sie dann anhand der Schraffur das Bild auf optimale Schärfe ein.

Bildschirm-Gitterspannung

1. Setzen Sie den Kontrast auf minimalen sowie die Helligkeit und die Farbsättigung auf normalen Pegel.
2. Prüfen Sie mit einem Oszilloskop die Amplitude der Clamp-Impulse des eingefügten Schwarzpegels während der 3. Zeile nach der vertikaler Schwarztastung am ICh1 Pin 9, ICh2 Pin 9 und ICh3 Pin 9.
3. Stellen Sie mit Ug2 die Amplitude des höchsten Clamp-Impulses auf +140 V ein (siehe Abbildung).



LL BILD UND TON, ZF MODUL

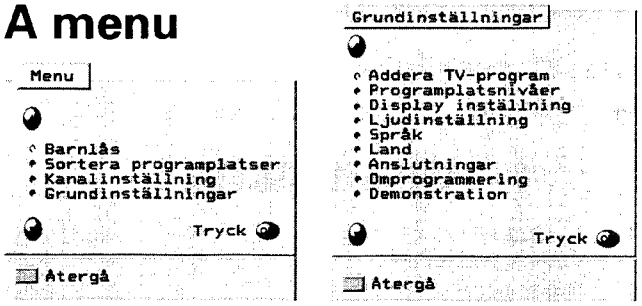
Video-Demodulator

1. Schalten Sie ein Testsignal auf (1 mV = 60 dBµV).
2. Schließen Sie ein Universal Voltmeter an den Steckverbinder X1, Pin 6 an.
3. Stellen Sie mit Ll6 die Gleichspannung auf den Wert ein, bei dem von 0 auf 5 V übergegangen wird.

Ton-Demodulator

1. Schalten Sie ein CCIR B/G Standard Testsignal auf (frequenzmodulierter Ton).
2. Schließen Sie ein universelles Voltmeter an ICl1, Pin 13 an.
3. Stellen Sie mit Ll1 die Gleichspannung auf +3.7 V ein.

A menu



Språkval

1. Tryck på MENU-knappen.
2. Välj GRUNDINSTÄLLNINGAR med markörknapparna (upp-/nedåt) och tryck på OK.
3. Välj SPRÅK och tryck på OK.
4. Välj önskat språk och tryck på OK.
5. Tryck på TV för att lämna språkvalet.

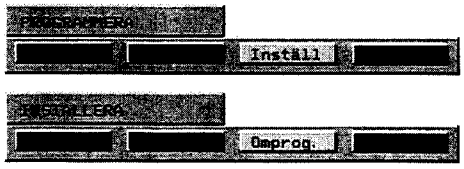
Manuell avstämning

1. Välj programplatsen som du vill avstämma.
2. Tryck på MENU-knappen.
3. Välj KANALINSTÄLLNING och tryck på OK-knappen.
4. Starta programsökning genom att trycka på den röda färgknappen.
5. Spara i minnet genom att trycka på OK-knappen.
6. Välj normalt TV-läge genom att trycka på TV-knappen.

APSi

1. Tryck på MENU-knappen.
2. Välj GRUNDINSTÄLLNINGAR och tryck på OK-knappen.
3. Välj OMPROGRAMMERING och tryck på OK-knappen.
4. Avstäm kanaler på nytt genom att trycka på OK-knappen.
5. Välj normalt TV-läge genom att trycka på TV-knappen.

B menu



Språkval

1. Tryck på PRG-knappen.
2. Välj Install genom att trycka på den blå knappen.
3. Välj Språk genom att trycka på den röda knappen.
4. Välj önskat språk med markörknapparna (upp-/nedåt) och tryck på OK.
5. Tryck på TV för att lämna språkvalet.

Manuell avstämning

1. Tryck på PRG-knappen.
2. Tryck på den röda knappen (Avstäm).
3. Tryck på röda knappen (Sök).
4. Välj programplatsen som programmet skall sparas på.
5. Tryck på den blå knappen (Spara).
6. Välj normalt TV-läge genom att trycka på TV-knappen.

APSi

1. Tryck på PRG-knappen.
2. Tryck på den blå knappen (Install.).
3. Tryck på den gula knappen (Omprog.).
4. Tryck på den röda knappen (APSi).
5. Tryck på den gröna knappen (Omprog.).
6. Tryck på den blå knappen (OK) för att avsluta.

NVRAM (ICf2)

Initialisering av NVRAM

NVRAM-minnet måste initialiseras och konfigureras, när NVRAM-minnet byts eller är totalt tömt på data. Följande procedur utgår ifrån att tv:n inte startar beroende på fel data i NVRAM.

1. Ställ mottagaren i serviceläge genom att slå på mottagaren med huvudströmbrytaren och tryck in knappsekvens MENU, TV och "i" inom 5 sekunder.
   OBS! Mottagaren är i serviceläge fast det ser ut som om den skulle vara i beredskapsläge!
2. Tryck på den röda färgknappen för att förkonfigurera enheten. Den gröna lysdioden blinkar till.

3a Samtidigt kontrolleras NVRAM-minnet och initialiseras om det var "tomt". Initialiseringen tar ca. 15 s. När initialiseringen är utförd, börjar den gröna lysdioden lysa. Fortsätt från punkt 4.

3b Automatisk initialisering blev inte utförd, om den gröna lysdioden inte börjar lysa kontinuerligt. I vissa fall kan lysdioden också börja lysa direkt efter konfigurering utan initialisering, beroende på NVRAM-minnets innehåll. I detta fall kan det räcka med att spara konfigureringen genom att trycka på OK-knappen och fortsätta med punkt 4.

3c Startar inte automatisk initialisering, kan du starta den manuellt med följande knappsekvens: BLÅ (vänta ca. 2 s.), 2, 5, 4 (vänta ca. 2 s.) och OK. Initialiseringen tar ca. 15 sekunder.

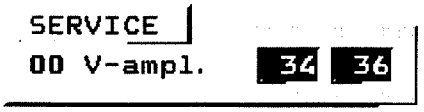
4. Stäng av mottagaren med huvudströmbrytaren.
5. Ställ mottagaren i serviceläge genom att slå på mottagaren med huvudströmbrytaren och tryck in knappsekvens MENU, TV och "i" inom 5 sekunder. Om mottagaren förblir i beredskapsläge, tryck två gånger på TV-knappen och tryck därefter på "i"-knappen.
6. Konfigurera mottagaren genom att trycka på den röda färgknappen. Konfigurerings-menyn visas på bildskärmen.
7. Tryck på OK-knappen.
8. Tryck på TV-knappen och ställ in ett eller flera TV-program.
9. Återgå till serviceläge genom att trycka på "i"-knappen.
10. Gör alla serviceinställningar (se avsnitt "SERVICEINSTÄLLNINGAR VIA IIC-BUS").
11. Stäng av mottagaren med huvudströmbrytaren.

SERVICEINSTÄLLNINGAR

VAL AV SERVICELÄGE

1. Ställ mottagaren i serviceläge genom att koppla på den med strömbrytaren och tryck inom 5 sekunder på fjärrkontrollens MENU-, TV- och "i"-knappar.

Obs! Om mottagaren förblir i beredskapsläge, efter det att man har valt serviceläge, koppla på mottagaren genom att trycka två gånger på TV-knappen och välj serviceläge med i-knappen.



I service läge visas service-menyn (som inkluderar justeringens nummer och namn, initialiserings- (vänster) och justeringsvärde (höger)) på bildskärmen.

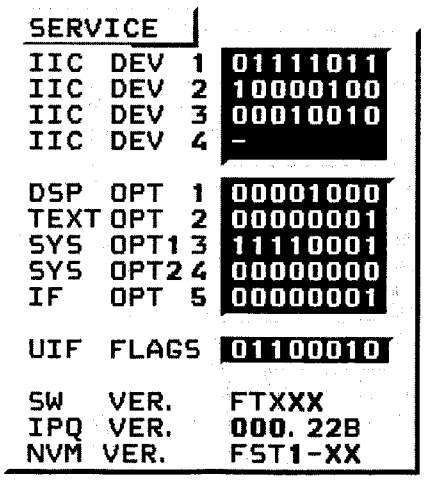
2. Återställ TV:n till normalt användarläge genom att stänga av mottagaren med strömbrytaren.

KONFIGURATION OCH FELSÖKNING

Apparaten måste alltid konfigureras efter att man gör ingrepp som ändrar dess funktion. När man trycker på den röda färgknappen, när apparaten är i serviceläge, kontrollerar prosessorn alla adresser för busstyrda kretsar och visar inställningen på bildskärmen.
Denna funktion kan även användas till felsökning. När en optionbit inte är "1" när den skall vara det, är IC:n inte monterad eller så är den defekt. I konfigureringsläge kan man aktivera/stänga av egenskaper för testbehov.

Ändring av Option byte

1. Välj konfiguration genom att trycka på den röda färgknappen (när apparaten står i serviceläge).



Förklaring
SW VER. = µP programversion.
IPQ VER. = Featurebox µP programversion.
NVM VER. = NVM programversion.

2. Välj IIC Device byte 1 - 4 eller Option byte 1 - 5 med markörknapparna (upp-/nedåt). Vald byte visas med avvikande färg.
3. Ställ in önskad optionbit med sifferknapparna (0...7).
4. Spara inställningen med OK-knappen.
5. Återgå till serviceläge genom att trycka på den röda färgknappen igen.

OPTIONBYTE FÖRKLARINGAR

Optionbits som ställs in automatiskt.

Bit	Förklaring	Inställning	'1'	'0'
		7 6 5 4 3 2 1 0		
	IIC DEV 1	01111011		
0	TV-tuner		Ja	Nej
1	Dekoder TDA9141		Ja	Nej
3	Featurebox kontroller (IPQ)		Ja	Nej
4	Avlänkningskontroller TDA9151		Ja	Nej
5	RGB-prosessor TDA4780		Ja	Nej
6	Videoswitch TDA6417		Ja	Nej
7	PIP-kontroller SDA9188		Ja	Nej
	IIC DEV 2	10000100		
0	PIP-tuner		Ja	Nej
2	Megatext SDA5273		Ja	Nej
7	MSP3400 / 3410		Ja	Nej
	IIC DEV 3	00010010		
0	DPL (AR600)		Ja	Nej
1	Subwoofer		Ja	Nej
4	Comb-filter (SVHS-linjen låg)		Ja	Nej
6	DPL (AR602)		Ja	Nej
	DSP OPT 1	00001000		
0-2	Högtalarkonfiguration, ställs i användarläge			
4	Basdelning (normalt Ja)		Ja	Nej
6	Förkorrigering för E- och B2-kabinett		Ja	Nej
	TXT OPT 2	00000001		
0	TEXT med yttre RAM		Ja	Nej
2	Flof-text (manuellt)		Ja	Nej
4	Textsynk-läge (manuellt)		Ja	Nej
5	Rullning av flersidor (manuellt)		Ja	Nej
	SYS OPT 1	11110001		
0	Kamera-anslutning (manuellt)		Ja	Nej
3	RGB E1		Ja	Nej
4	NTSC 3,58 MHz		Ja	Nej
5	ACI (manuellt)		Ja	Nej
6	NICAM (manuellt)		Ja	Nej
7	Loudness (manuellt)		Ja	Nej
	SYS OPT 2	00000000		
0	Påslagning med nätbrytaren		Nej	Ja
6	Påslagning till demoläge (manuellt)		Ja	Nej
7	Hotel-TV funktioner (manuellt)		Ja	Nej
	IF OPT 5	00000001		
0	B/G-norm		Ja	Nej
1	I-norm		Ja	Nej
2	D/K-norm		Ja	Nej
3	L/L'-norm		Ja	Nej
5	Baseband		Ja	Nej
7	Endast UHF-tuner		Ja	Nej
	UIF FLAGS	01100010		
4	OEM-option		Ja	Nej

SERVICEINSTÄLLNINGAR VIA IIC-BUS

Fjärrkontrollknappar i serviceläge

När mottagaren är i serviceläge kan man välja normalt TV-läge med TV-knappen och återgå till serviceläge med i-knappen. Siffer- och markörknappar används till inställningar. Med den gula färgknappen kan man tillfälligt gömma service-menyn. Inställningarna sparas med OK-knappen.

Inställningar för olika bildformat

Gör först alla inställningar med normalt 4:3-bildformat. TV:n använder dessa inställningar för alla bildformat om inte andra inställningar görs. I varje justering näms det skilt om justeringen måste göras med olika bildformat. Upprepa endast dessa justeringar.

Service-inställningar

1. Ge en tvåsiffrig kod, som hänvisar till justeringen i fråga, (t.ex. 05 = horisontalfas, se följande tabeller) med sifferknapparna.

Obs! *Justeringen kan också väljas med markörknapparna (upp-/nedåt).*

2. Justera med markörknapparna (vänster/höger).

3. Spara inställningen med OK-knappen.

Obs!

- *För att undvika ofullständig inställning bör justeringen sparas i minnet omedelbart efter ändring.*
- *Om justeringen måste göras skilt för olika bildformat, välj normalt användarläge med TV-knappen och ändra bildformatet med zoom-knappen. Återgå till serviceläge med i-knappen.*

VERTIKALA BILDINSTÄLLNINGAR

Justering	Kod	OSD-namn	Init. värde	Obs!
Vertikal amplitud Vertikal amplitud, 16:9 Vertikal amplitud, 16:9 zoom	00	V-ampl.	34	Justera bildhöjden rätt. *Obs! Skild justering för normal 4:3, normal 16:9 och 16:9 zoom bildformat.*
Vertikal centrering	01	V-shift	4	
Vertikal start	02	V-start	0	
Vertikal S-korrigering Vertikal S-korrigering 16:9 Vertikal S-korrigering16:9 zoom	03	S-corr.	49	*Obs! Skild justering för normal 4:3, normal 16:9 och 16:9 zoom bildformat.*
Vertikal amplitud 4:3 zoom (grov) Vertikal amplitud 4:3 zoom (fin)	12 13	Zoom-H Zoom-L	71 0	Välj 4:3 zoom bildformat och justera bilden till rätt förhållande.
Centrering, 4:3 zoom (V-wait)	14	Shift	23	Obs! Välj 4:3 zoom bildformat före justering.

HORISONTALA BILDINSTÄLLNINGAR

Justering	Kod	OSD-namn	Init. värde	Obs!
Bildbredd	04	Width	42	
Horisontal fas H-fas zoom H-fas RGB H-fas RGB zoom	05	H-shift	33	*Obs! Skild justering för normal 4:3 och 4:3 zoom bildformat.* *Gör även justeringen med RGB-signal.*
Öst-Väst-parabol Öst-Väst-parabol, 16:9 Öst-Väst-parabol, 16:9 zoom	06	Parab.	24	*Obs! Skild justering för normal 4:3, normal 16:9 och 16:9 zoom bildformat.*
Öst-Väst hörnkorrigering Öst-Väst hörnkorrigering, 16:9 Öst-Väst hörnkorrigering,16:9 zoom	07	Corner	25	*Obs! Skild justering för normal 4:3, normal 16:9 och 16:9 zoom bildformat.*
Öst-Väst trapetskorrigering	08	Trapezium	5	
EHT-kompensering	09	EHT	6	Ställ ljus och kontrast till 90% och kompensera bildstorlek variationer.

ÖVRIGA INSTÄLLNINGAR

Justering	Kod	OSD-namn	Init. värde	Obs!
Röd referens Grön referens Blå referens	20 21 22	R ref. G ref. B ref.	52 21 16	*Obs! Denna procedur är nödvändig när t.ex. bildrör eller CRT-modul är utbytt. Anslut en testbild och ställ in R-, G- och B-referens. Ställ därefter in R-, G- och B-förstärkning.*
Röd förstärkning Grön förstärkning Blå förstärkning	17 18 19	R gain G gain B gain	41 32 32	
Låsningsnivå	11	Clamp	3	Normalt krävs ingen justering.
Vitbegränsning	23	PWL	63	Normalt krävs ingen justering.
Gamma korrigering	24	GAMMA	32	Normalt krävs ingen justering.
Tuner AGC	25	TV AGC	170	Anslut en 1 mV (60 dBµV) testsignal. Justera bilden brusfri.

SERVICEINSTÄLLNINGAR

O NÄTDELEN

Drivspänning och skyddskrets

1. Ställ ljus och kontrast till normal nivå. Anslut en universalvoltmätare till katoden på Do11.
2. Kontrollera bildrörstyp från kopplingsschemat och justera DC-spänningen till +140 V (±1 V) eller +145 V (±1 V) med Ro45.
3. Kontrollera överströmsskyddets funktion efter serviceingrepp på nätdelens primärsida. Ställ mottagaren i beredskapsläge. Kortslut dioden Do13:ns katod till jord och håll kortslutningen på plats. När överströmskyddet fungerar, försöker nätdelen att starta 2-3 ggr före den slutar definitivt. Ta bort kortslutningen och slå på apparaten med huvudströmbrytaren.

K HORISONTALAVLÄNKNINGS BLOCKET

Horisontal linearitet

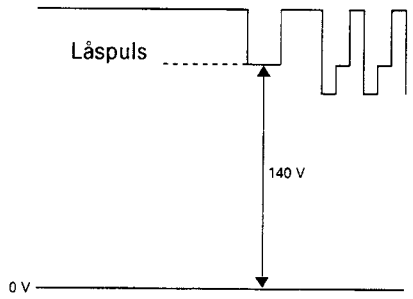
Justera med Lk2.

Fokus

Ställ ljus och kontrast till normal nivå. Använd en testbild med rutmönster och justera bilden för maximum skärpa.

Skärmgallerspänning Ug2

1. Ställ kontrast i minimum, ljus och färgmättnad till normal nivå.
2. Efter vertikalsläckning finns en svartnivå mätpuls. Mät med ett oscilloskop på ICh1 stift 9, ICh2 stift 9 och ICh3 stift 9 och kontrollera vilket steg som har den högsta svartnivån (högsta spänningen på svartnivå mätpulsen).
3. Justera med Ug2 spänningen till +140 V.



LL BILD OCH LJUD MF-MODULEN

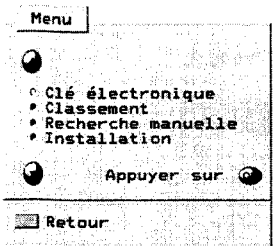
Videodemodulatorn

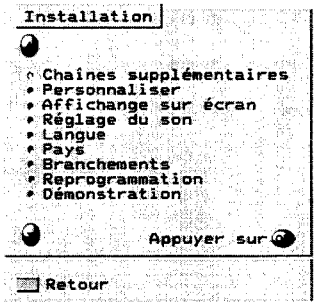
1. Anslut en testsignal (1 mV = 60 dBµV).
2. Anslut en universal voltmätare till modulkontakten X1 stift 6.
3. Justera, med LI6, DC-spänningen till punkten där den växlar från 0 till 5 V.

Ljuddemodulatorn

1. Anslut en CCIR B/G-norms (FM-modulerat ljud) testsignal.
2. Anslut en universalvoltmätare till ICI1 stift 13.
3. Justera, med LI1, DC-spänningen till +3.7 V.

A menu





Sélection de la langue

1. Appuyez sur la touche MENU.
2. Sélectionnez INSTALLATION à l'aide de la touche curseur (vers le haut ou vers le bas) et appuyez sur la touche OK.
3. Sélectionnez LANGUE et appuyez sur la touche OK.
4. Sélectionnez la langue souhaité et appuyez sur la touche OK.
5. Appuyez sur la touche TV.

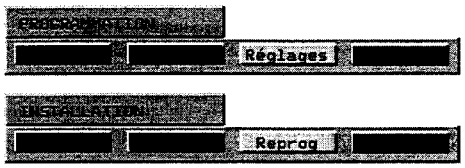
Recherche manuelle

1. Sélectionnez le numéro que vous souhaitez régler.
2. Appuyez sur la touche MENU.
3. Sélectionnez RECHERCHE MANUELLE et appuyez sur la touche OK.
4. Commencez la recherche de chaîne en appuyant sur la touche rouge.
5. Memorisez en appuyant sur la touche OK.
6. Revenez en mode réception TV normale en appuyant sur la touche TV.

APSi

1. Appuyez sur la touche MENU.
2. Sélectionnez INSTALLATION et appuyez sur la touche OK.
3. Sélectionnez REPROGRAMMATION et appuyez sur la touche OK.
4. Commencez la recherche de chaînes en appuyant sur la touche OK.
5. Revenez en mode réception TV normale en appuyant sur la touche TV.

B menu



Sélection de la langue

1. Appuyez sur la touche PRG.
2. Sélectionnez Install. en appuyant sur la touche bleue.
3. Sélectionnez Langue en appuyant sur la touche rouge.
4. Sélectionnez la langue souhaité à l'aide de la touche curseur (vers le haut ou vers le bas) et appuyez sur la touche OK.
5. Appuyez sur la touche TV.

Recherche manuelle

1. Appuyez sur la touche PRG.
2. Appuyez sur la touche rouge (Syntonis.).
3. Appuyez sur la touche rouge (Recherche).
4. Sélectionnez le numéro de programme sur lequel cette chaine doit être mémorisée.
5. Appuyez sur la touche bleue (Mémorise).
6. Revenez en mode réception TV normale en appuyant sur la touche TV.

APSi

1. Appuyez sur la touche PRG.
2. Appuyez sur la touche bleue (Install.).
3. Appuyez sur la touche jaune (Reprog).
4. Appuyez sur la touche rouge (APSi).
5. Appuyez sur la touche verte (Reprog).
6. Appuyez sur la touche bleue (OK) pour quitter.

NVRAM (ICf2)

Installation de la NVRAM

Si la mémoire NVRAM est remplacée ou si elle a perdu la totalité de ses données, elle doit être initialisée et configurée. Dans la procédure suivante, on considère que le téléviseur ne démarre pas du tout en raison de la présence de données erronées dans la NVRAM.

1. Définissez le récepteur en mode service: Après avoir mis en marche votre récepteur à l'aide de l'interrupteur principal, vous devez appuyer successivement, dans les cinq secondes, sur les touches MENU, TV et "i" de la télécommande.
   Remarque! Le récepteur est en mode service même si rien ne s'affiche à l'écran!
2. Appuyez sur le bouton RED pour préconfigurer le téléviseur. Le voyant vert clignote alors une fois.

3a En même temps, le contrôleur vérifie la NVRAM et l'initialise automatiquement si elle était "vide". L'initialisation prend environ 15 secondes. Lorsqu'elle est terminée, le voyant vert s'allume. Passez à l'étape 4.

3b Si le voyant vert ne s'allume pas, l'initialisation automatique n'a pas eu lieu. Dans certains cas, le voyant peut aussi s'allumer immédiatement après la configuration sans qu'il y ait initialisation, selon le contenu de la mémoire NVRAM. Dans ce cas, l'enregistrement de la nouvelle configuration à l'aide de la touche "OK" et le passage à l'étape 4 peuvent suffire.

3c Si l'initialisation automatique n'a pas eu lieu, vous pouvez la lancer manuellement en entrant le code clé : BLUE, 2, 5 et 4. L'initialisation prendra environ 15 secondes.

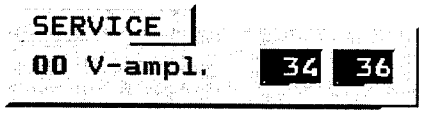
4. Eteignez votre récepteur.
5. Définissez le récepteur en mode service: Après avoir mis en marche votre récepteur à l'aide de l'interrupteur principal, vous devez appuyer successivement, dans les cinq secondes, sur les touches MENU, TV et "i" de la télécommande. S'il reste en mode veille, appuyez deux fois sur le bouton TV et ensuite sur le bouton i".
6. Configurez le en appuyant sur le bouton rouge. Un menu de configuration apparaitra.
7. Appuyez sur le bouton OK.
8. Appuyez sur la touche TV et effectuez le réglage d'un ou de plusieurs canaux de télévision.
9. Revenez au mode de service en appuyant sur la touche "i".
10. Effectuez ensuite tous les réglages de service (voir le chapitre "REGLAGES DE SERVICE AU MOYEN DU BUS IIC").
11. L'installation est terminée. Vous pouvez, maintenant, éteindre votre récepteur.

REGLAGES DE SERVICE

SELECTION DU MODE SERVICE

1. Le récepteur est mis en mode service lors de sa mise en marche à l'aide de l'interrupteur principal et en appuyant successivement dans les cinq secondes sur les touches MENU, TV, et "i" de la télécommande.

Remarque ! *Si le récepteur reste en mode veille après avoir sélectionné le mode service, allumez-le en appuyant deux fois sur la touche TV et sélectionnez le mode service en appuyant sur la touche i.*



En mode service, un menu de réglages (comprenant le numéro et le nom du réglage, les valeurs d'initialisation (gauche) et de réglages (droite)) s'affiche à l'écran.

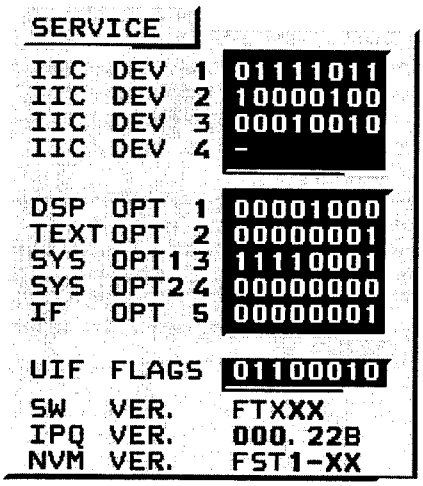
2. Sortez du mode service en éteignant le récepteur à l'aide de l'interrupteur principal.

CONFIGURATION ET DIAGNOSTIC DES DEFAUTS

L'appareil doit être configuré après ajoût ou suppression de certaines options. En appuyant sur la touche rouge en mode service, le processeur vérifie toutes les adresses possibles des circuits conduisant au bus et affiche les réglages à l'écran.
Cette propriété peut également être utilisée lors de la recherche d'un défaut ; si un bit d'option n'est pas positionné à '1' alors qu'il le devrait, cela signifie soit que le circuit (ou le module) est endommagé ou soit qu'il est absent.
Pour faire le test, vous pouvez changer la position du bit lorsque vous êtes en mode configuration.

Changement des octets d'option

1. En mode service, sélectionnez le mode configuration en appuyant sur la touche rouge.



Description
SW VER. = version du programme µP
IPQ VER. = version du programme du Feature Box.
NVM VER. = version de la NVRAM

2. Sélectionnez l'octet 1 - 4 du système IIC ou l'octet d'option 1 - 5 avec les touches curseurs (vers le haut ou vers le bas). Sélectionnez l'octet apparaissant en lumière brillante.
3. Placez les bits à l'aide des touches numérotées (0 ... 7).
4. Mémorisez les réglages en appuyant sur la touche OK.
5. Repassez en mode service en appuyant à nouveau sur la touche rouge.

DESCRIPTIONS DES OCTETS D'OPTION

Bits d'option positionnés automatiquement:

Bit	Description	Present 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01111011**		
0	Tuner TV		oui	non
1	Décodeur TDA9141		oui	non
3	Contrôleur de module 100 Hz (IPQ)		oui	non
4	Contrôleur de déviation TDA9151		oui	non
5	Processeur RVB TDA4780		oui	non
6	Matrice vidéo TDA6417		oui	non
7	Contrôleur PIP SDA9188		oui	non
	IIC DEV 2	**10000100**		
0	Tuner PIP		oui	non
2	Mégatexte SDA5273		oui	non
7	MSP3400 / 3410		oui	non
	IIC DEV 3	**00010010**		
0	DPL (AR600)		oui	non
1	Boomer		oui	non
4	Filtre en peigne (basse ligne SVHS)		oui	non
6	DPL (AR602)		oui	non
	DSP OPT 1	**00001000**		
0-2	Configuration des haut-parleurs (passez en mode utilisateur)			
4	Fractionnement des basses		oui	non
6	Pré-égalisation des haut-parleurs pour les ébénisteries E et B2		oui	non
	TXT OPT 2	**00000001**		
0	TXT grâce au RAM externe		oui	non
2	Flof text possible (manuel)		oui	non
4	TXT accrochage mode (manuel)		oui	non
5	TXT souspage défilement (manuel)		oui	non
	SYS OPT 1	**11110001**		
0	Prise pour caméra installée (manuel)		oui	non
3	RGB E1		oui	non
4	NTSC 3.58 MHz		oui	non
5	ACI possible (manuel)		oui	non
6	NICAM possible (manuel)		oui	non
7	Loudness (manuel)		oui	non
	SYS OPT 2	**00000000**		
0	TV démarrage rupteur de linge		non	oui
2	Démarrage TV mode demo (manuel)		oui	non
7	Hotel TV function possible (manuel)		oui	non
	IF OPT 5	**00000001**		
0	Système B/G		oui	non
1	Système I		oui	non
2	Système D/K		oui	non
3	Système L/L'		oui	non
5	Bande de base		oui	non
7	Uniquement tuner UHF		oui	non
	UIF FLAGS	**01100010**		
4	Option OEM		oui	non

REGLAGES DE SERVICE AU MOYEN DU BUS IIC

Les touches de la télécommande en mode service

Lorsque le récepteur est en mode service, vous pouvez sélectionner le mode TV normale en appuyant sur la touche TV et repasser en mode service en appuyant sur la touche i.
Les touches curseurs et numérotées sont utilisées pour réaliser les réglages de service. La touche jaune dissimule temporairement le menu service. La touche OK permet de mémoriser les réglages.

Réglages pour les différents formats d'image

Réalisez d'abord tous les réglages en format d'image normale 4:3. Le téléviseur utilise ces valeurs de réglages pour tous les formats d'image, si aucun autre réglage n'a été réalisé. Pour chaque réglage, il est précisé si le réglage doit être fait séparément pour les différents formats d'image. Répétez seulement ces réglages.

Réalisation des réglages de service

1. Donnez un code à deux chiffres permettant de définir le réglage à l'aide des touches numérotées. (ex. 05 = phase horizontale, consultez les tableaux suivants)

Remarque ! *Les réglages peuvent être également sélectionnés grâce aux touches curseurs (vers le haut / vers le bas).*

2. Effectuez le réglage avec les touches curseurs (gauche/ droite).

3. Mémorisez la nouvelle valeur en appuyant sur la touche OK.

Remarque !

- *Pour éviter des réglages incomplets, mémorisez immédiatement chaque réglage après l'avoir réalisé.*
- *Si le réglage doit être fait séparément pour les différents formats d'image, sélectionnez le mode normal d'utilisation en appuyant sur la touche TV et changez le format d'image grâce à la touche zoom. Repassez en mode service en appuyant sur la touche i.*

REGLAGES DE L'IMAGE VERTICALE

Réglage	Code	Nom OSD	Valeur Init.	Remarque!
Amplitude verticale Amplitude verticale 16:9 Amplitude verticale 16:9 zoom	00	V-ampl.	34	Réglez la hauteur de l'image selon une proportion correcte *Remarque! Réglages séparés pour un format d'image normal 4:3, normal 16:9 et zoom 16:9.*
Décentrage vertical	01	V-shift	4	
Balayage vertical	02	V-start	0	
Correction S verticale Correction S verticale16:9 Correction S verticale zoom 16:9	03	S-corr.	49	*Remarque! Réglages séparés pour un format d'image normal 4:3, normal 16:9 et zoom 16:9.*
Verticale zoom 4:3 (grossière) Verticale zoom 4:3 (précise)	12 13	Zoom-H Zoom-L	71 0	Sélectionnez le format d'image zoom 4:3 et réglez l'image selon une proportion correcte.
Valeur de centre, déplacement zoom 4:3 (attendre V)	14	Shift	23	*Remarque ! Avant tout réglage, sélectionnez le format d'image zoom 4:3.*

REGLAGES HORIZONTAUX D'IMAGE

Réglage	Code	Nom OSD	Valeur Init.	Remarque!
Largeur E-O	04	Width	42	
Phase horizontale Phase H zoom Phase H RVB Phase H RVB zoom	05	H-shift	33	*Remarque! Réglages séparés pour format d'image normal 4:3 et zoom 4:3.* *De plus, faîtes les mêmes réglages en utilisant le signal RVB.*
Parabole E-O Parabole E-O 16:9 Parabole E-O zoom 16:9	06	Parab.	24	*Remarque! Réglages séparés pour un format d'image normal 4:3, normal 16:9 et zoom 16:9.*
Coin E-O Coin E-O 16:9 Coin E-O zoom 16:9	07	Corner	25	*Remarque! Réglages séparés pour un format d'image normal 4:3, normal 16:9 et zoom 16:9.*
Déformation trapézoïdale EW	08	Trapezium	5	
Compensation EHT	09	EHT	6	Portez la lumière et le contraste à 90% et compensez le changement dans la taille de l'image.

AUTRES REGLAGES

Réglages	Code	Nom OSD	Valeur init.	Remarque!
Référence rouge	20	R ref.	52	*Remarque! La procédure est nécessaire lorsque, par exemple, le tube image ou le module CRT a été remplacé. Appliquez une mire et réglez les références R, V et B. Réglez ensuite les gains R, G et B*
Référence verte	21	G ref.	21	
Référence bleue	22	B ref.	16	
Amplification rouge	17	R gain	41	
Amplification vert	18	G gain	32	
Amplification bleu	19	B gain	32	
Déplacement du support	11	Clamp	3	Normalement pas besoin de régler
Seuil des crêtes de blanc	23	PWL	63	Normalement pas besoin de régler
Correction gamma	24	GAMMA	32	Normalement pas besoin de régler
Tuner CAG	25	TV AGC	170	Appliquez un signal test de 1 mV (60 dBµV) Réglez l'image exactement sans bruit.

REGLAGES DE SERVICE

O BLOC D'ALIMENTATION DE PUISSANCE

Tension d'alimentation et circuit de protection

1. Placez la lumiére et le contraste sur le niveau normal. Branchez un voltmètre à la cathode de Do11.
2. Réglez, à l'aide de Ro45, la tension DC à 140 V ou à +145 V (+/- 1 V). (tension de référence dépendant du type de tube image, voir schéma).
3. Vérifiez la protection à maximum de courant . Mettez le récepteur en mode veille. Court-circuitez la cathode de Do13 avec la masse. Lorsque le courant de protection est actif, l'alimentation doit essayer de démarrer 2-3 fois avant de s'arrêter. Enlevez le court-circuit et éteignez votre récepteur.

K BLOC DE DEVIATION HORIZONTALE

Linéarité horizontale

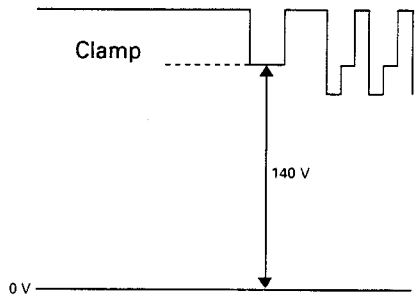
Réglez sur Lk2.

Focalisation

Placez la lumiére et le contraste sur le niveau normal. Utilisez la mire et réglez l'image pour obtenir une mire excellente.

Tension de G2

1. Placez le contraste sur le minimum, la saturation de lumiére et de couleur sur le niveau normal.
2. Utilisez un oscilloscope et contrôlez le niveau du palier arrière du niveau de noir (avant l'information vidéo) aux bornes 9 de ICh1, 9 de ICh2 et 9 de ICh3.
3. Réglez, à l'aide du potentiométre de G2, le niveau du palier arrière le plus haut à +140 V sur Ug2 (consultez le dessin).



LL MODULE IF DU SON ET DE L'IMAGE

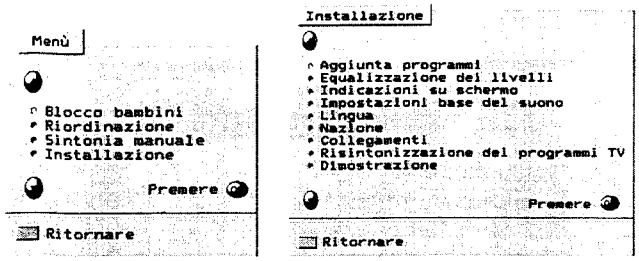
Démodulateur vidéo

1. Appliquez un signal test (1 mV = 60 dBµV).
2. Branchez un voltmètre à la borne 6 de la prise du module X1.
3. Réglez la tension DC avec LI6 sur le point où il change de 0 à 5 V.

Démodulateur du son

1. Appliquez un signal test de la norme CCIR B/G (son modulé FM).
2. Branchez un voltmètre à la borne 13 de ICI1.
3. Réglez la tension DC avec le LI1 pour obtenir +3.7 V.

A menu



Selezione della lingua

1. Premere il tasto MENU.
2. Selezionare INSTALLAZIONE tramite il tasto cursore (su/giù) e premere il tasto OK.
3. Selezionare LINGUA) e premere il tasto OK.
4. Selezionare la lingua desiderato e premere il tasto OK.
5. Premere il tasto TV.

Sintonia manuale

1. Selezionare il numero programma che si desidera sintonizzare.
2. Premere il tasto MENU.
3. Selezionare SINTONIA MANUALE e premere il tasto OK.
4. Avviare la ricerca canali premendo il tasto rosso.
5. Memorizzare le impostazioni premendo il tasto OK.
6. Ritornare alla normale ricezione TV premendo il tasto TV.

APSi

1. Premere il tasto MENU.
2. Selezionare INSTALLAZIONE e premere il tasto OK.
3. Selezionare RISINTONIZZAZIONE DEI PROGRAMMI TV e premere il tasto OK.
4. Avviare la ricerca canali premendo il tasto rosso.
5. Ritornare alla normale ricezione TV premendo il tasto TV.

B menu

Selezione della lingua

1. Premere il tasto PRG.
2. Premere il tasto azzurro per selezionare Install.
3. Premere il tasto rosso per selezionare Lingua (Language).
4. Selezionare la lingua desiderato tramite il tasto cursore (su/giù) e premere il tasto OK.
5. Premere il tasto TV.

Sintonia manuale

1. Premere il tasto PRG.
2. Premere il tasto rosso (Sintonia).
3. Premere il tasto rosso (Ricerca).
4. Selezionare il numero del programma.
5. Premere il tasto azzurro (Memoria).
6. Ritornare alla normale ricezione TV premendo il tasto TV.

APSi

1. Premere il tasto PRG.
2. Premere il tasto azzurro (Install.).
3. Premere il tasto giallo (Riprog.).
4. Premere il tasto rosso (APSi).
5. Premere il tasto verde (Riprog.).
6. Premere il tasto azzurro (OK) per uscire.

NVRAM (ICf2)

Installazione della NVRAM

La memoria NVRAM deve essere inizializzata e configurata nel caso in cui venga sostituita oppure tutti i dati in essa contenuti siano andati perduti. La procedura di seguito riportata presume che l'apparecchio TV non si avvii affatto a causa di dati errati presenti nella memoria NVRAM.

1. Portare l'apparechio in modo di servizio accendendolo con l'interruttore di rete ed, entro 5 secondi, premendo i tasti "MENU" "TV" e "i" in sequenza.
   Nota: Il televisore è in modo servizio anche se sembra essere in stand-by.
2. Premere il tasto rosso per preconfigurare l'apparecchio TV. Al termine della preconfigurazione, l'indicatore verde lampeggerà una volta.

3a Contemporaneamente l'unità di controllo verificherà la memoria NVRAM e la inizializzerà automaticamente qualora risulti "vuota". La procedura di inizializzazione durerà circa 15 secondi. Una volta terminata tale procedura, si accenderà l'indicatore verde.
Proseguire con il punto 4.

3b Se l'indicatore verde non si accende a luce fissa, l'inizializzazione automatica non ha avuto luogo. In alcuni casi, l'indicatore verde potrebbe anche accendersi subito dopo la configurazione, senza che abbia avuto luogo alcuna procedura di inizializzazione, a seconda del contenuto della memoria NVRAM. In tal caso, potrebbe essere sufficiente memorizzare la nuova configurazione premendo il tasto "OK" e proseguire con il punto 4.

3c Se l'inizializzazione automatica non ha avuto luogo, è possibile avviarla automaticamente immettendo il codice chiave, premendo in sequenza i seguenti tasti: BLU, 2, 5 e 4. La procedura di inizializzazione durerà circa 15 secondi.

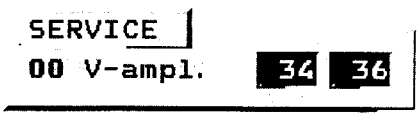
4. Spegnere l'apparecchio tramite l'interruttore di rete.
5. Portare l'apparechio in modo di servizio accendendolo con l'interruttore di rete ed, entro 5 secondi, premendo i tasti "MENU" "TV" e "i" in sequenza.
   Se l'apparecchio rimane in stand-by premere due volte il tasto TV e poi il tast "i".
6. Configurare l'apparecio premendo il tasto rosso. Sullo schermo apparirà il menu configurazione.
7. Premere il tasto OK.
8 Premere il tasto TV e sintonizzare uno o più canali.
9 Tornare al modo manutenzione premendo il tasto "i".
10. Effettuare tutte le regolazioni di servizio (Vedere "REGOLAZIONI DI SERVIZIO TRAMITE IIC BUS").
11. Spegnere l'apparecchio tramite l'interruttore di rete.

REGOLAZIONI DI SERVIZIO

SELEZIONE DEL MODO SERVIZIO

1. L'impostazione del modo servizio avviene accendendo il ricevitore tramite l'interruttore generale e premendo in sequenza i tasti del telecomando MENU, TV e i entro 5 secondi.

Nota: Se il ricevitore rimane in standby dopo aver selezionato il modo servizio, accendere l'apparecchio TV premendo due volte il tasto TV e selezionare il modo servizio premendo il tasto i.



Quando il ricevitore è in modo servizio, viene visualizzato sullo schermo un menu delle regolazioni (indicante anche il nome ed il numero di ciascuna regolazione, i valori di inizializzazione (sinistra) e regolazione (destra)).

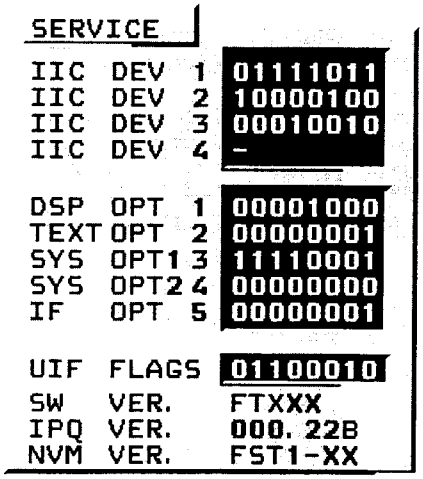
2. Per uscire dal modo servizio, spegnere il ricevitore tramite l'interruttore generale.

CONFIGURAZIONE E DIAGNOSTICA

L'apparecchio TV deve essere configurato qualora si aggiungano o si eliminino delle opzioni. Premendo il tasto rosso in modo servizio, il processore controlla tutti gli indirizzi possibili dei circuiti con bus e visualizza le impostazioni sullo schermo. Questa funzione può aiutare la ricerca dei difetti; se un Bit Opzione non si trova a "1" quando dovrebbe esserlo, il circuito integrato relativo, o non è presente, oppure è difettoso. Nel menu configurazione è possibile attivare/disattivare i Bit di opzione a scopo di controllo.

Modifica dei bit di opzione

1. In modo servizio, selezionare il modo configurazione premendo il tasto rosso.



Descrizione
SW VER. = Versione software µP.
IPQ VER. = Versione software µP Feature box.
NVM VER. = Versione software NVM.

2. Selezionare IIC Device byte 1 - 4 oppure Option byte 1 - 5 tramite i tasti cursore (su/giù). Il byte selezionato compare evidenziato sullo schermo.
3. Impostare i bit tramite i tasti numerici (da 0 a 7).
4. Memorizzare le impostazioni premendo il tasto OK.
5. Tornare al modo servizio premendo di nuovo il tasto rosso.

DESCRIZIONI DEI BYTE DI OPZIONE

Bit Opzioni inseriti automaticamente:

Bit	Descrizione	Impostazione '1'	'0'
		7 6 5 4 3 2 1 0	
	IIC DEV 1	**01111011**	
0	Sintonizzatore TV	Sì	No
1	Decodificatore TDA9141	Sì	No
3	Controllore feature box (IPQ)	Sì	No
4	Controllore deflessione TDA9151	Sì	No
5	Processore RGB TDA4780	Sì	No
6	Interruttore video TDA6417	Sì	No
7	Controllore PIP SDA9188	Sì	No
	IIC DEV 2	**10000100**	
0	PIP tuner	Sì	No
2	Megatext SDA5273	Sì	No
7	MSP3400 / 3410	Sì	No
	IIC DEV 3	**00010010**	
0	DPL (AR600)	Sì	No
1	Subwoofer	Sì	No
4	Filtro Comb (SVHS a bassa linea)	Sì	No
6	DPL (AR602)	Sì	No
	DSP OPT 1	**00001000**	
0-2	Configurazione altoparlanti (modo utente)		
4	Sdoppiamento bassi	Sì	No
6	Pre-equalizzazione altoparlanti surround DSP	Sì	No
	TXT OPT 2	**00000001**	
0	TXT con RAM esterna	Sì	No
2	Flof text abilitato (manuale)	Sì	No
4	Modo di sincronizz. txt (manuale)	Sì	No
5	Scorrimento subpagine televideo (manuale)	Sì	No
	SYS OPT 1	**11110001**	
0	Connettore camera installato (manuale)	Sì	No
3	RGB E1	Sì	No
4	NTSC 3.58 MHz	Sì	No
5	ACI abilitato (manuale)	Sì	No
6	NICAM abilitato (manuale)	Sì	No
7	Loudness abilitato (manuale)	Sì	No
	SYS OPT 2	**00000000**	
0	Accensione del TV con l'interruttore	No	Sì
6	Accensione del TV in modo demo (manuale)	Sì	No
7	Funzioni hotel abilitate (manuale)	Sì	No
	IF OPT 5	**00000001**	
0	Sistema B/G	Sì	No
1	Sistema I	Sì	No
2	Sistema D/K	Sì	No
3	Sistema L/L'	Sì	No
5	Banda base	Sì	No
7	Solo sintonizzatore UHF	Sì	No
	UIF FLAGS	**01100010**	
4	Opzione OEM	Sì	No

REGOLAZIONI DI SERVIZIO TRAMITE BUS IIC

Uso del telecomando nel modo servizio

Quando si è in modo servizio, è possibile passare al normale modo TV premendo il tasto TV sul telecomando ed eventualmente tornare al modo servizio premendo il tasto i, sempre sul telecomando.
Le regolazioni di servizio vengono effettuate tramite i tasti numerici ed i tasti cursore. Il tasto giallo nasconde temporaneamente il menu di servizio, mentre il tasto OK memorizza le impostazioni.

Regolazione per un diverso formato immagine

Effettuare prima tutte le regolazioni necessarie con il formato immagine 4:3 normale. L'apparecchio TV utilizza questi valori per tutti i formati immagine se non sono state effettuate altre regolazioni. Per ciascuna regolazione viene specificato se deve essere effettuata separatamente per un diverso formato immagine, nel qual caso ripetere soltanto le regolazioni che interessano.

Come effettuare le regolazioni di servizio

1. Immettere tramite i tasti numerici il codice a due cifre relativo alla regolazione che si desidera effettuare (ad esempio, 05 = fase orizzontale; fare riferimento alle tabelle di seguito riportate).

Nota: *Le regolazioni possono essere selezionate anche tramite i tasti cursore (su/giù).*

2. Effettuare la regolazione tramite i tasti cursore (destra/ sinistra).

3. Memorizzare i nuovi valori premendo il tasto OK.

Nota:
- *Per evitare regolazioni incomplete, si consiglia di memorizzare ciascuna regolazione immediatamente dopo averla effettuata.*
- *Se una regolazione deve essere effettuata separatamente per un diverso formato immagine, selezionare il normale modo utente premendo il tasto TV e modificare il formato immagine tramite il tasto zoom. Tornare al modo servizio premendo il tasto i.*

REGOLAZIONI VERTICALI DELL'IMMAGINE

Regolazione	Codice	Display	Valore iniz.	Nota:
Ampiezza verticale Ampiezza verticale 16:9 Ampiezza verticale 16:9 zoom	00	V-ampl.	34	Regolare l'altezza dell'immagine sul rapporto corretto. *Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Spostamento centratura verticale	01	V-shift	4	
Inizio scansione verticale	02	V-start	0	
Correzione-S verticale Correzione-S verticale16:9 Correzione-S verticale 16:9 zoom	03	S-corr.	49	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Pendenza verticale 4:3 zoom (approssimata) Pendenza verticale 4:3 zoom (fine)	12 13	Zoom-H Zoom-L	71 0	Selezionare il formato immagine 4:3 zoom e regolare l'immagine sul rapporto corretto.
Valore centratura, spostamento 4:3 zoom (V-wait)	14	Shift	23	*Nota: Prima di effettuare la regolazione, selezionare il formato immagine 4:3 zoom.*

REGOLAZIONI ORIZZONTALI DELL'IMMAGINE

Regolazione	Codice	Display	Valore iniz.	Nota:
Larghezza EW	04	Width	42	
Fase orizzontale Zoom fase H RGB fase H Zoom RGB fase H	05	H-shift	33	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale e 4:3 zoom.* *Inoltre, effettuare le stesse regolazioni usando il segnale RGB.*
Parabola EW Parabola EW 16:9 Parabola EW 16:9 zoom	06	Parab.	24	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Angolo EW Angolo EW16:9 Angolo EW 16:9 zoom	07	Corner	25	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Trapezoidale EW	08	Trapezium	5	
Compensazione EHT	09	EHT	6	Impostare luminosità e contrasto a 90% e modificare di conseguenza la dimensione dell'immagine.

ALTRE REGOLAZIONI

Regolazione	Codice	Display	Valore iniz.	Note!
Riferimento rosso	20	R ref.	52	*Nota: Questa procedura è necessaria quando si sostituisce il cinescopio, il modulo CRT etc. Collegare un segnale test e regolare i riferimenti di R, G e B Regolare il guadagno di R, G e B.*
Riferimento verde	21	G ref.	21	
Riferimento blu	22	B ref.	16	
Guadagno rosso	17	R gain	41	
Guadagno verde	18	G gain	32	
Guadagno blu	19	B gain	32	
Spostamento aggancio	11	Clamp	3	Regolazione generalmente non necessaria.
Limite picco bianco	23	PWL	63	Regolazione generalmente non necessaria.
Correzione gamma	24	GAMMA	32	Regolazione generalmente non necessaria.
Sintonizzatore AGC	25	TV AGC	170	Applicare un segnale di test 1 mV (60 dBµV). Regolare al meglio l'immagine.

REGOLAZIONI DI SERVIZIO

O BLOCCO ALIMENTATORE

Circuito di protezione dell'alimentatore

1. Regolare la luminosità ed il contrasto sui valori normali. Collegare un voltmetro universale al catodo di Do11.
2. Regolare con Ro45 la tensione DC di +140 V ±1 V (oppure +145 V ±1 V dipende dal tipo di cinescopio, vedere schema elettrico).
3. Controllare sempre la protezione alle sovracorrenti dopo aver effettuato qualsiasi operazione di servizio sul circuito primario dell'alimetazione. Per controllarla procedere come segue:
   Portare l'apparecchio in stand-by.
   Cortocircuitare il catodo del Do13 a massa e mantenere il corto circuito. Se la protezione alle sovracorrenti lavora correttamente, l'alimentatore cercherà di partire per 2/3 volte prima di bloccarsi definitivamente.
   Togliere il corto circuito e accendere l'apparecchio dall'interruttore di rete.

K BLOCCO DEFLESSIONE ORIZZONTALE

Linearità orizzontale

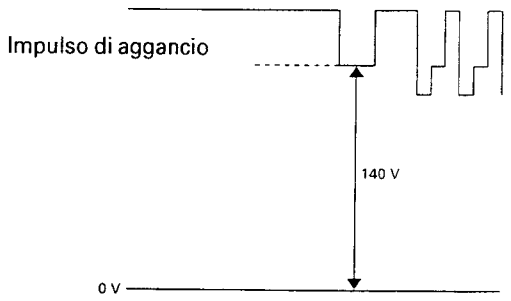
Regolare con Lk2.

Messa a fuoco

Regolare la luminosità ed il contrasto sui valori normali. Utilizzando un quadro di test, regolare l'immagine fino ad ottenere il livello di risoluzione ottimale.

Tensione di griglia schermo

1. Regolare il contrasto sul valore minimo e la luminosità e la saturazione colore sui valori normali.
2. Con un oscilloscopio controllare l'ampiezza degli impulsi di aggancio del livello del nero inserito (Inserted black level) per la durata di 3 righe dopo lo spegnimento verticale su ICh1 piedino 9, ICh2 piedino 9 e ICh3 piedino 9.
3. Con Ug2 regolare a +140 V l'ampiezza dell'impulso di aggancio più alto (vedere figura).



LL MODULO FI VIDEO E AUDIO

Demodulatore video

1. Applicare un segnale di test (1 mV = 60 dBµV).
2. Collegare un voltmetro universale al connettore del modulo X1 piedino 6.
3. Regolare con LI6 la tensione cc fino sul punto in cui passa da 0 a 5 V.

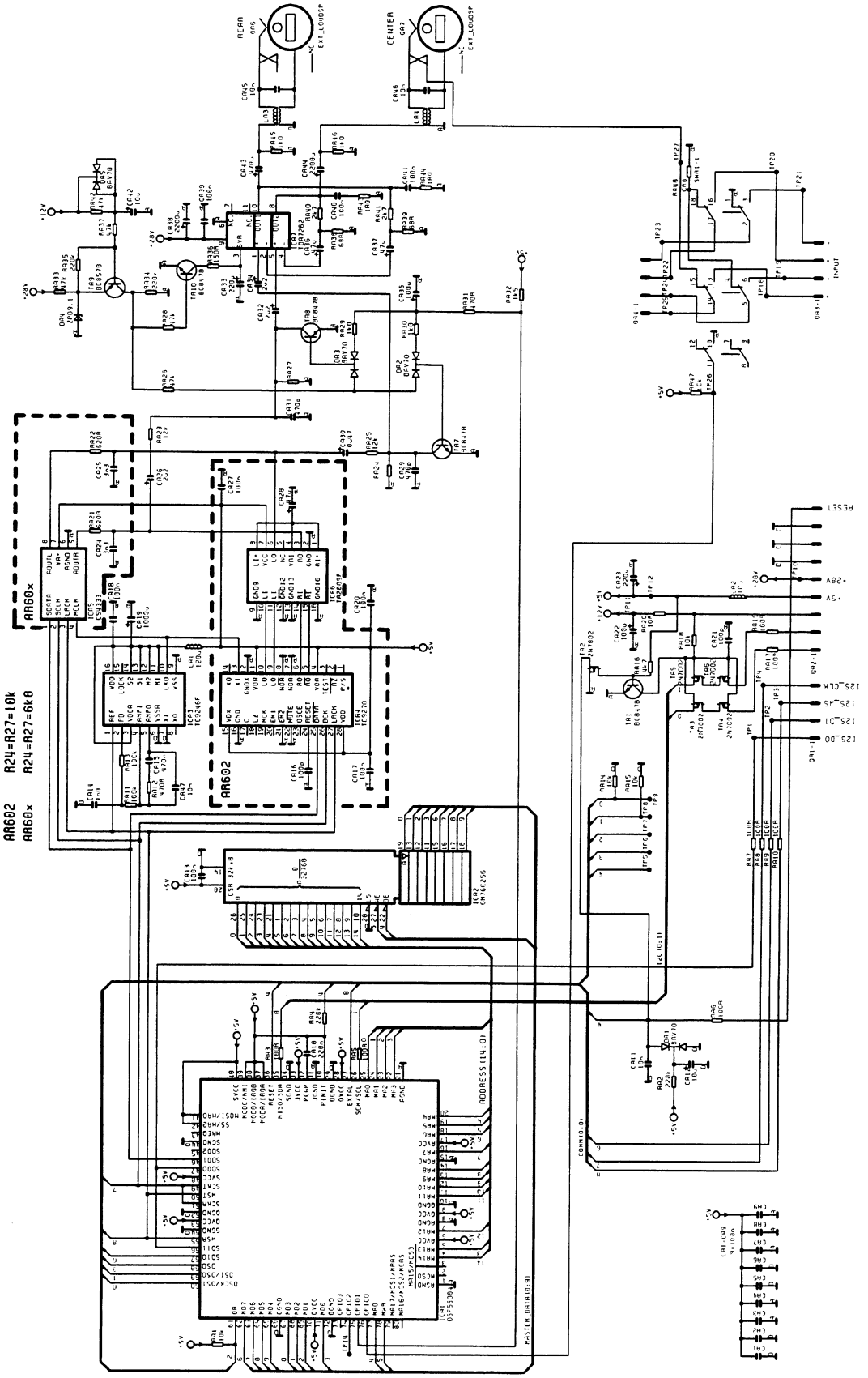
Demodulatore audio

1. Applicare un segnale di test CCIR B/G standard (suono modulato FM).
2. Collegare un voltmetro universale a ICI1 piedino 13.
3. Regolare con LI1 la tensione cc a +3.7 V.

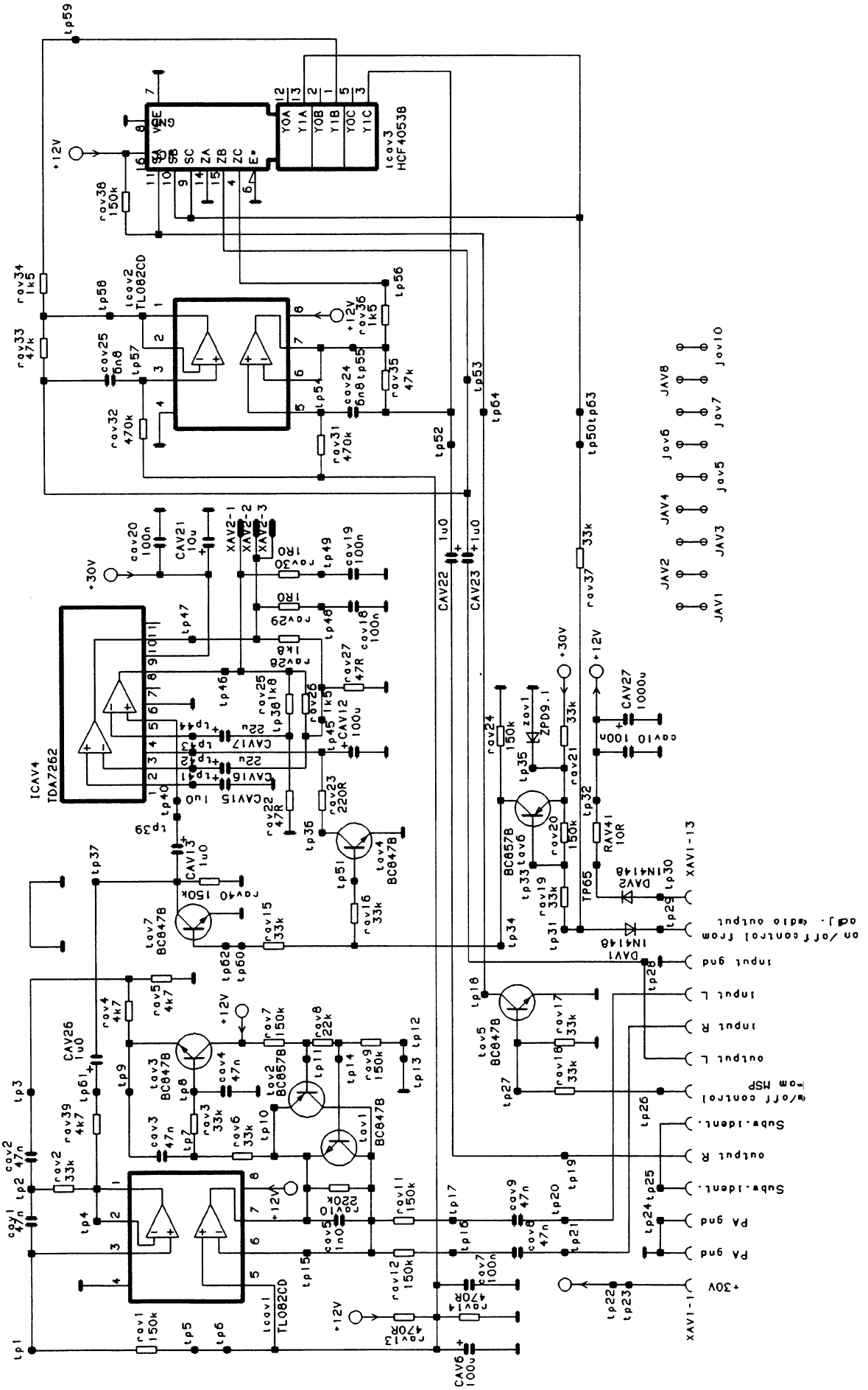
(GB) VARIABLE COMPONENTS
(D) RÖHRENABHÄNGIGE BAUTEILE
(F) COMPOSANT VARIABLES
(I) COMPONENTI CHE DIFFERISCONO
(S) KOMPONENTSKILLNAD

Picture	Vi 28	Vi 29	Vi 29	Vi 29	Vi 29	Vi 29
Tube	A66 EDN	A68 EEH	A68 EES	A68 EES	A68EEH	A68EEH
	43x100	048x122	038x122	038x322	048x322	048x322
Mainboard	AX**V	AX**L	AX**S	AX**T	AX**U	AX**U
PW-block	PW-600	PW-601	PW-602	PW-603	PW-604	PW-605
Ck24	11n	13n	13n	13n	13n	13n
Ck25	1n0	-	-	330p	330p	330p
Ck26	33n	15n	15n	15n	15n	15n
Ck27	560n	390n	390n	390n	390n	390n
Ck28	470n	-	-	-	-	-
Ck29		4u7	4u7	4u7	4u7	4u7
Ck36	330n	-	-	-	-	-
Ck38	4u7	-	-	-	-	-
Rk3	4R7	4R7	4R7	4R7	4R7	4R7
Rk31	-	1R8	1R8	-	-	-
Rk32	-	1R5	1R5	-	-	-
Rk33	-	1R8	1R8	-	-	-
Rk34	0R33	1R5	1R5	0R33	0R33	0R33
Rk35	-	1R8	1R8	-	-	-
Rk36	0R47	1R8	1R8	0R47	0R47	0R47
Rk37	-	1R5	1R5	-	-	-
Rk40	-	1R5	1R5	-	-	-
Rk49	5k6	-	-	-	-	-
Rk54	1R2	1R2	1R2	1R5	1R2	1R5
Rk55	1R8	1R8	1R5	1R5	1R8	1R5
Rk65	-	6R8	6R8	6R8	6R8	6R8
Rk59	6R8	jumper	jumper	jumper	jumper	jumper
Rs5	1R21	1R54	1R54	1R54	1R54	1R54
Rs11	560R	560R	560R	1k8	560R	1k8
Rs12	560R	560R	560R	1k8	560R	1k8
Rs16	560R	560R	560R	1k8	560R	1k8
Rs13	560R	560R	560R	-	560R	-
Rs14	560R	560R	560R	-	560R	-
Dk9	1N4937	-	-	-	-	-
Lk1	FJ1368	-	-	-	-	-
Mk3	TCP8581	FM2544	FM2544	FM2544	FM2544	FM2544
focus	144M	144M	-	-	144M	144M
FO600	-	-	Yes	Yes	-	-
UG2	96010141	96010141	96010141	96010141	96010141	96010141
defl.coil	220R	680R	680R	100R	200R	100R
J351	No	Yes	Yes	Yes	Yes	Yes
J352	Yes	No	No	No	No	No
rt21	390R	-	-	330R	390R	390R/330R

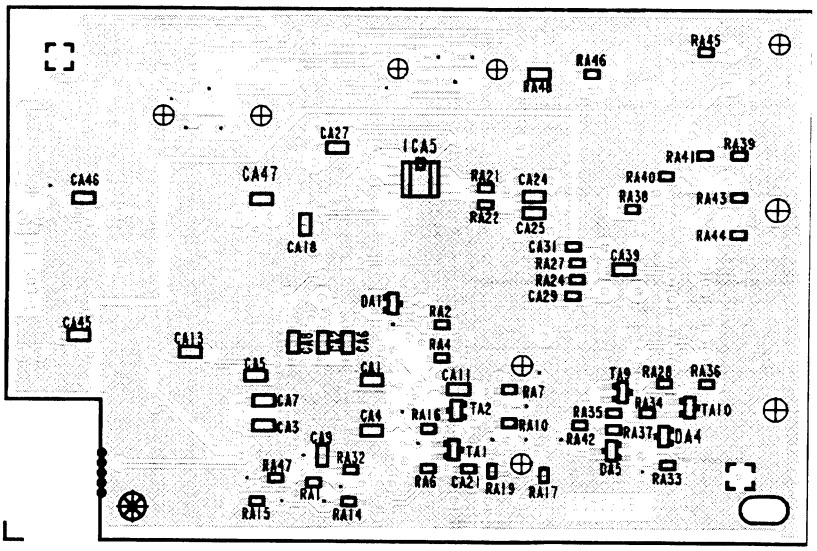
AR602 Surround module

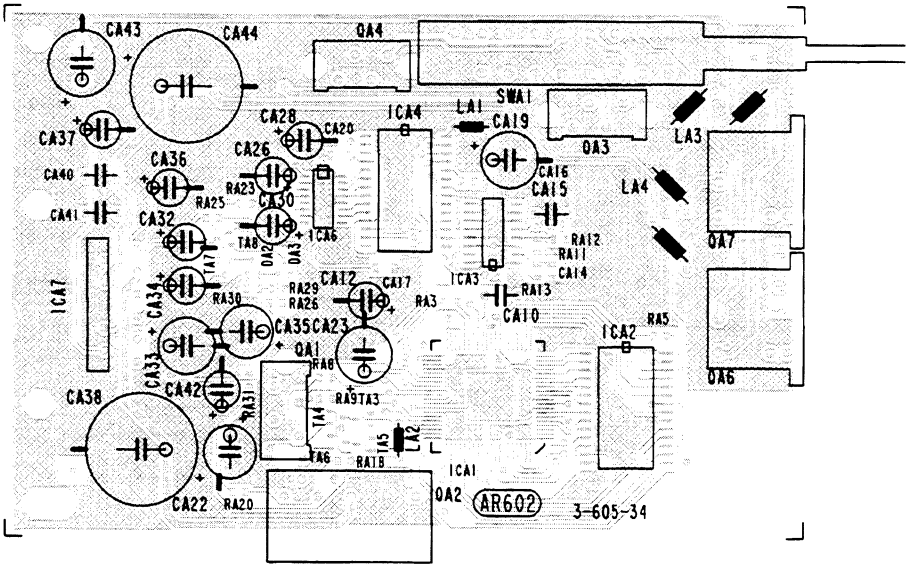


AV601 Subwoofer module

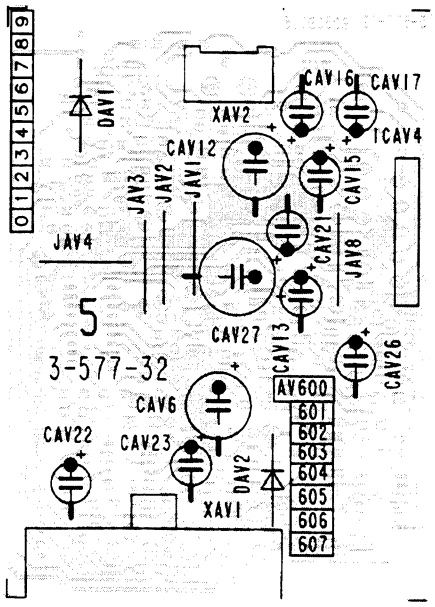


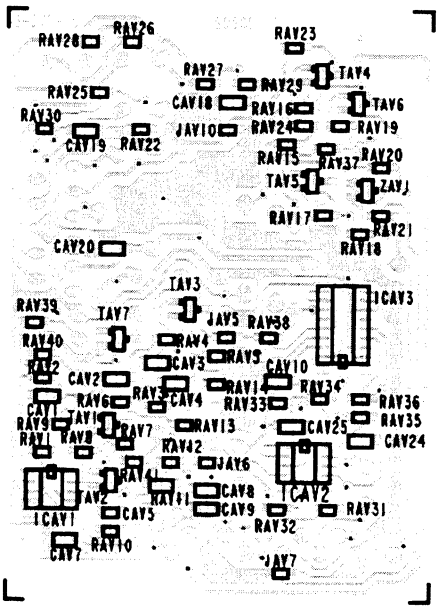
AR602 Surround module



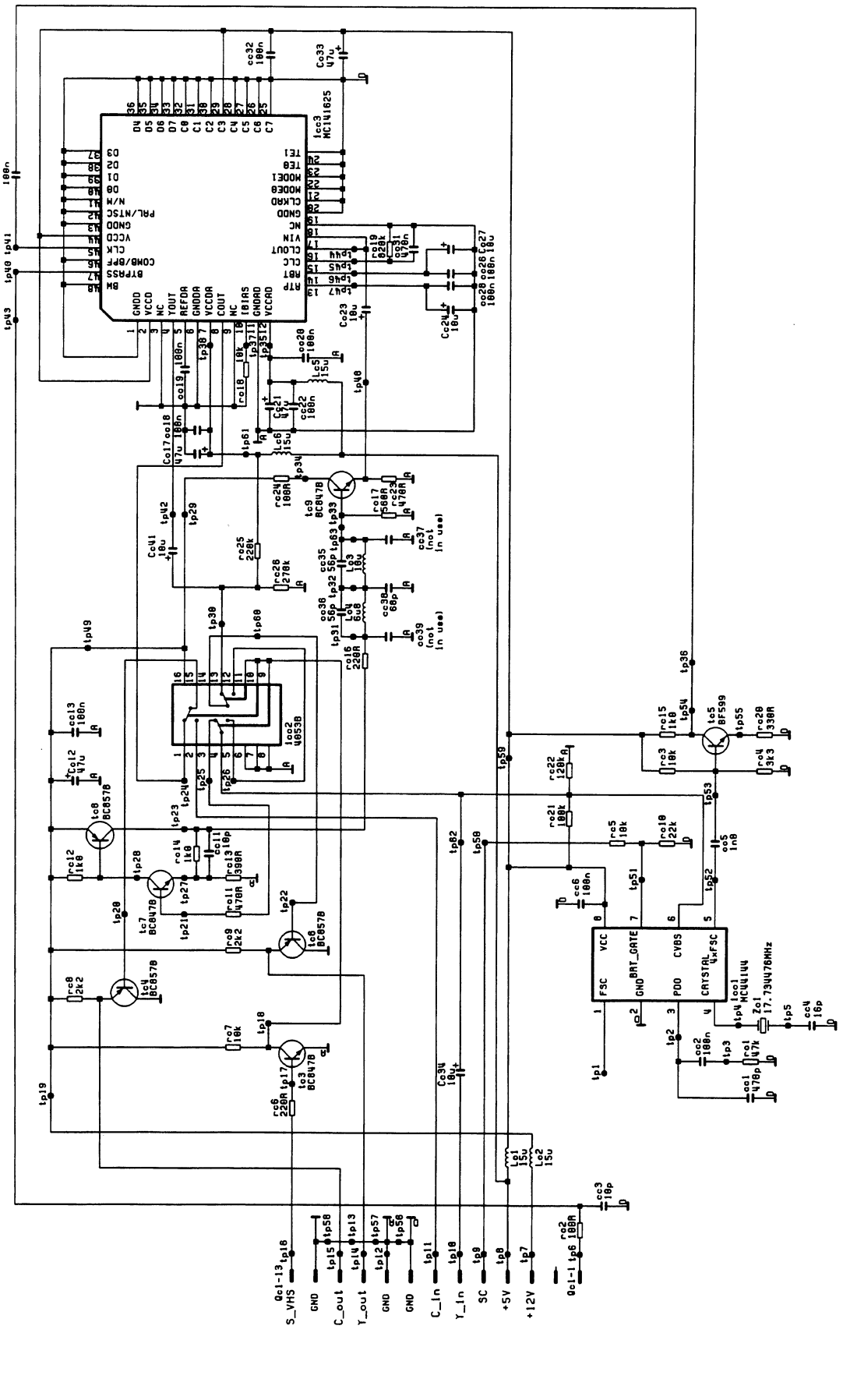


AV601 Subwoofer module

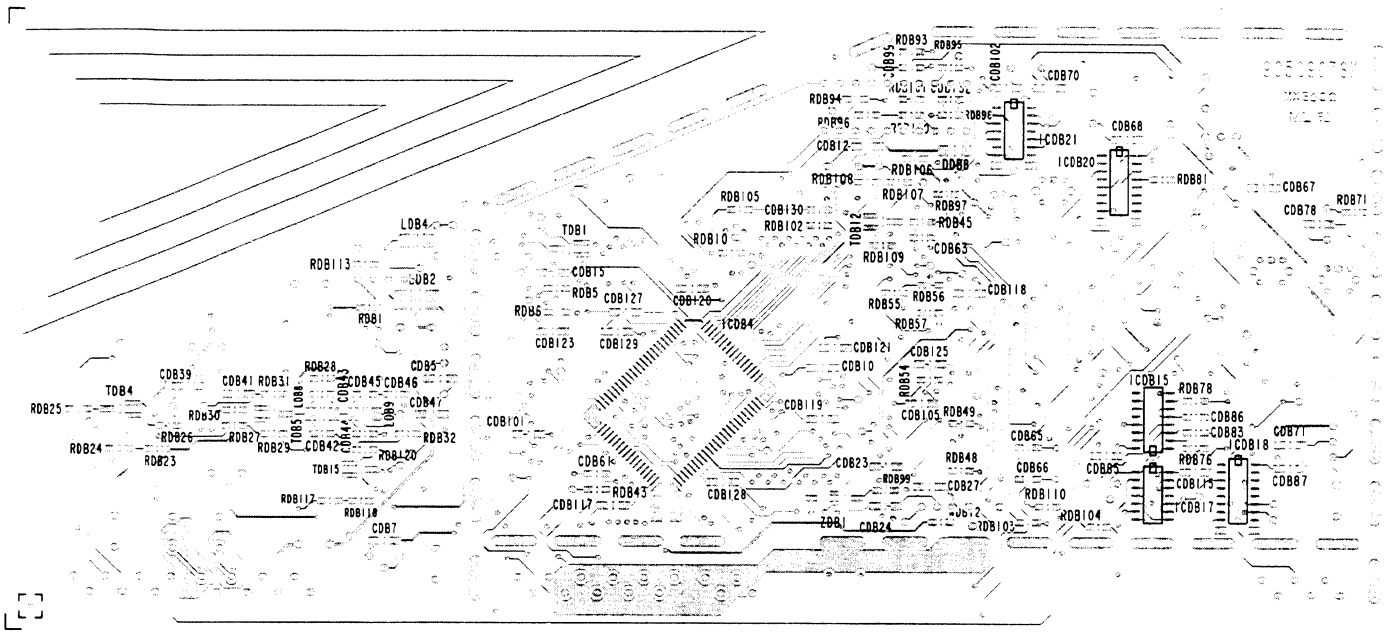


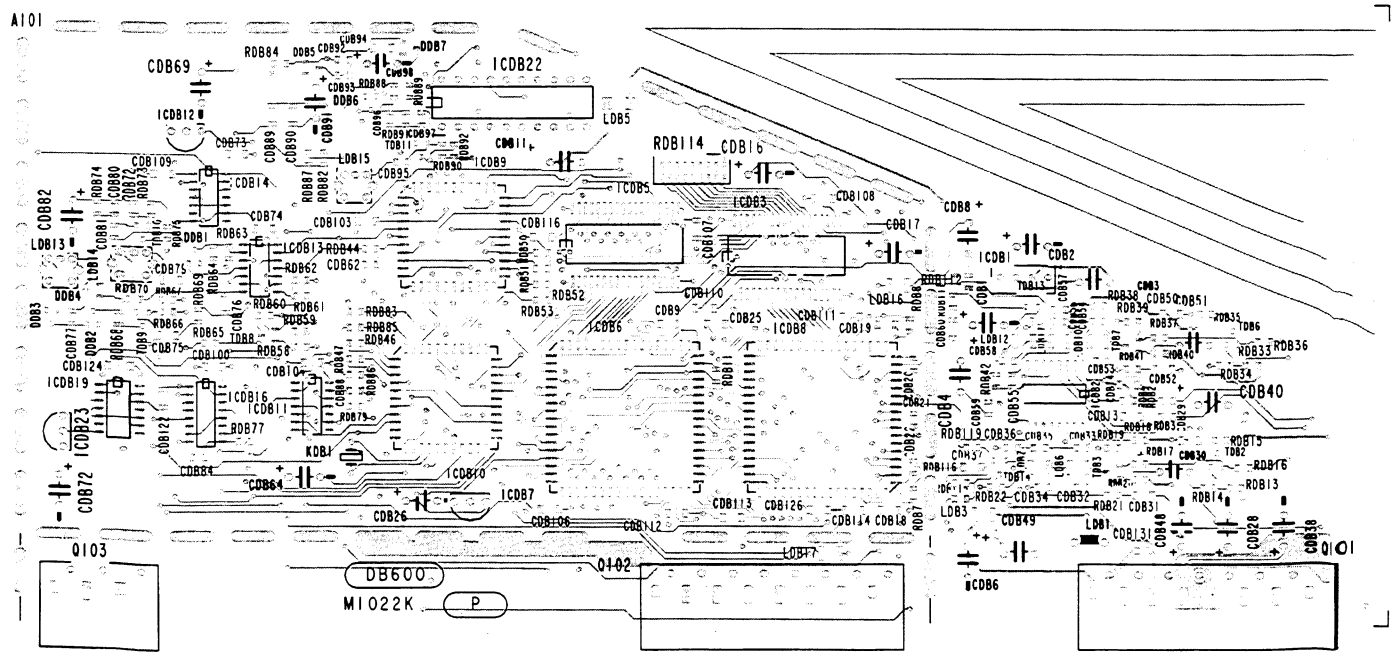


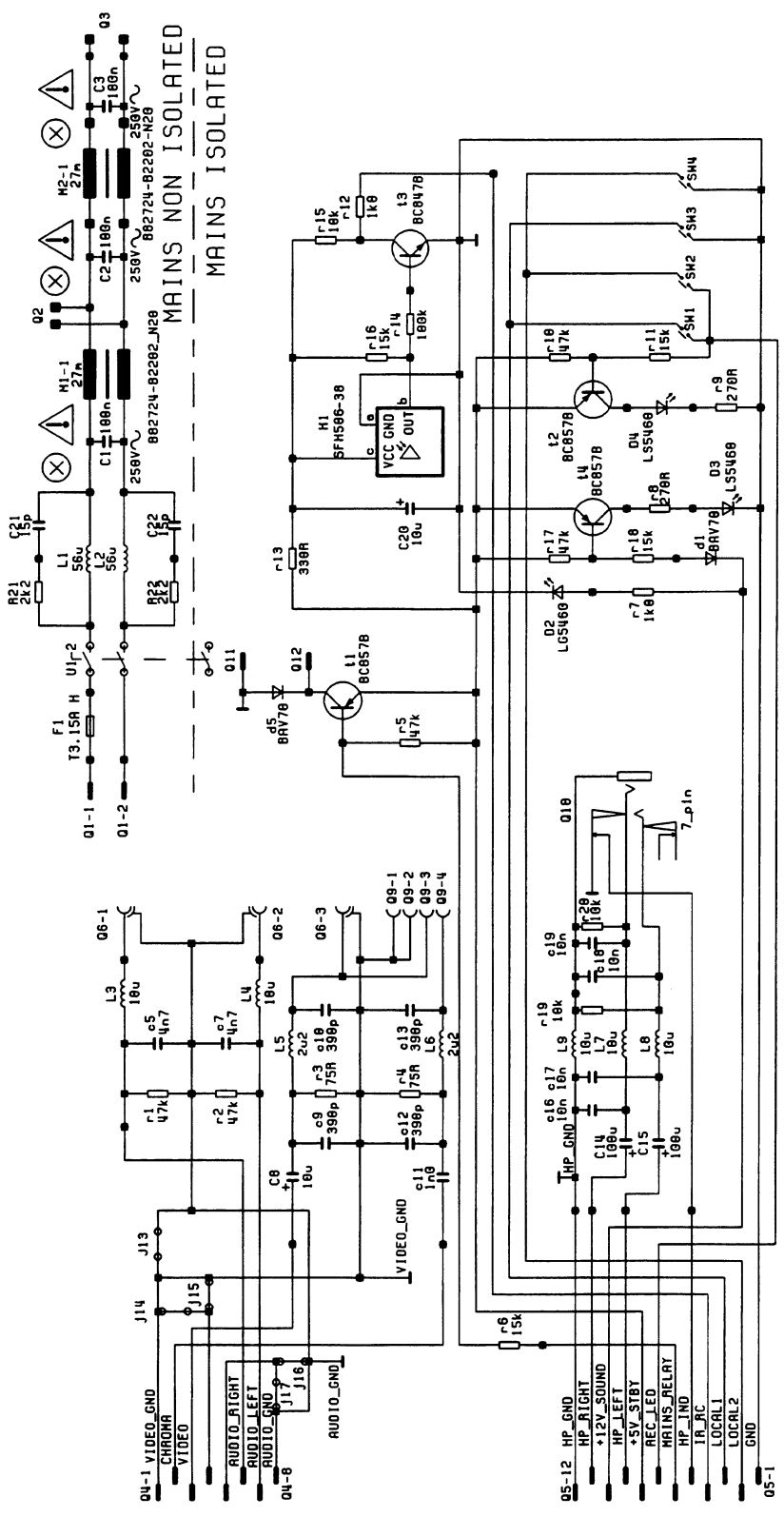
CF602 Combfilter module



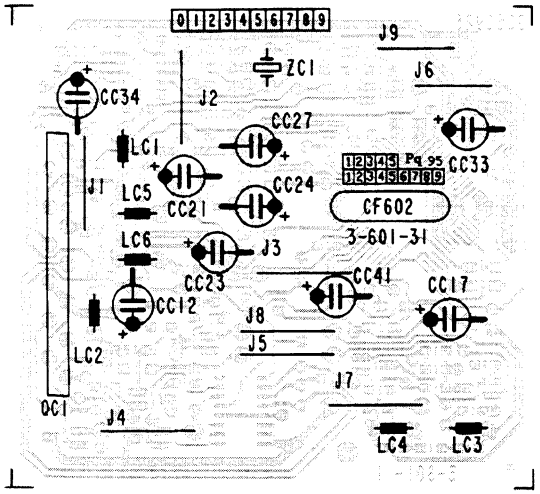
DB600 Feature module

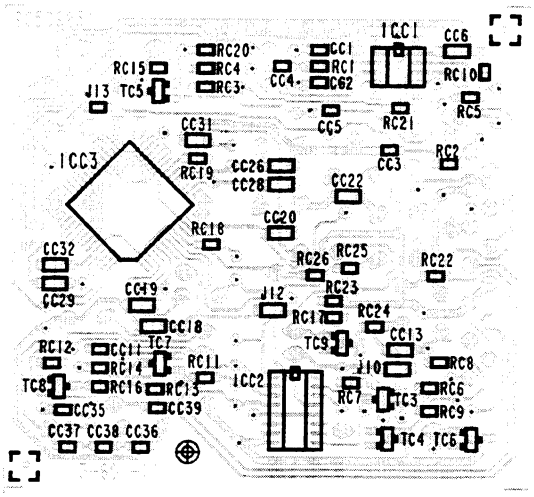




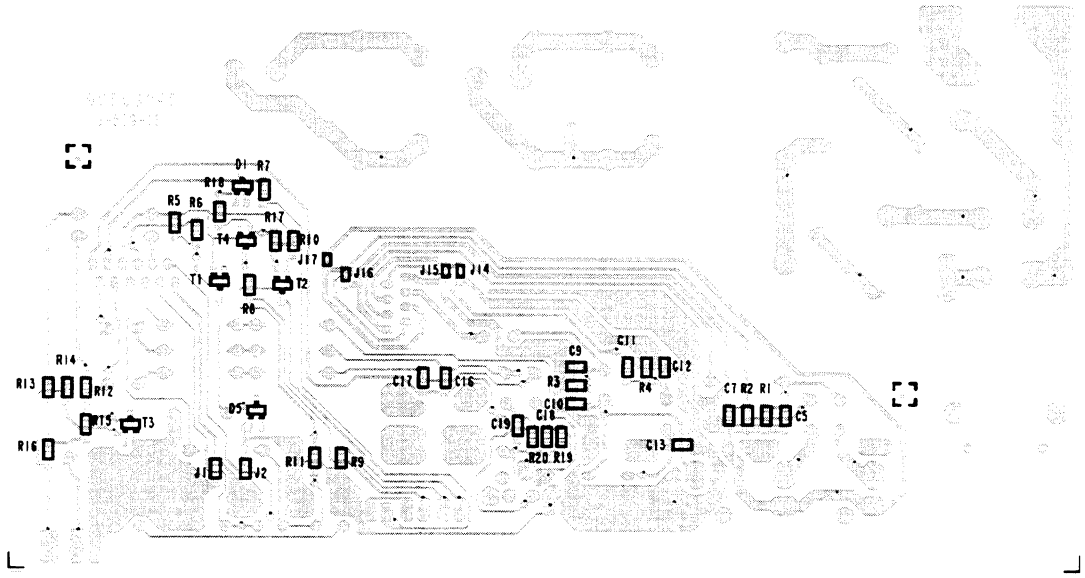

MAINS NON ISOLATED
MAINS ISOLATED
VIDEO_GND
AUDIO_GND
HP_GND
SUPPORT_PLATE
CAMERA_CONN_SHIELD

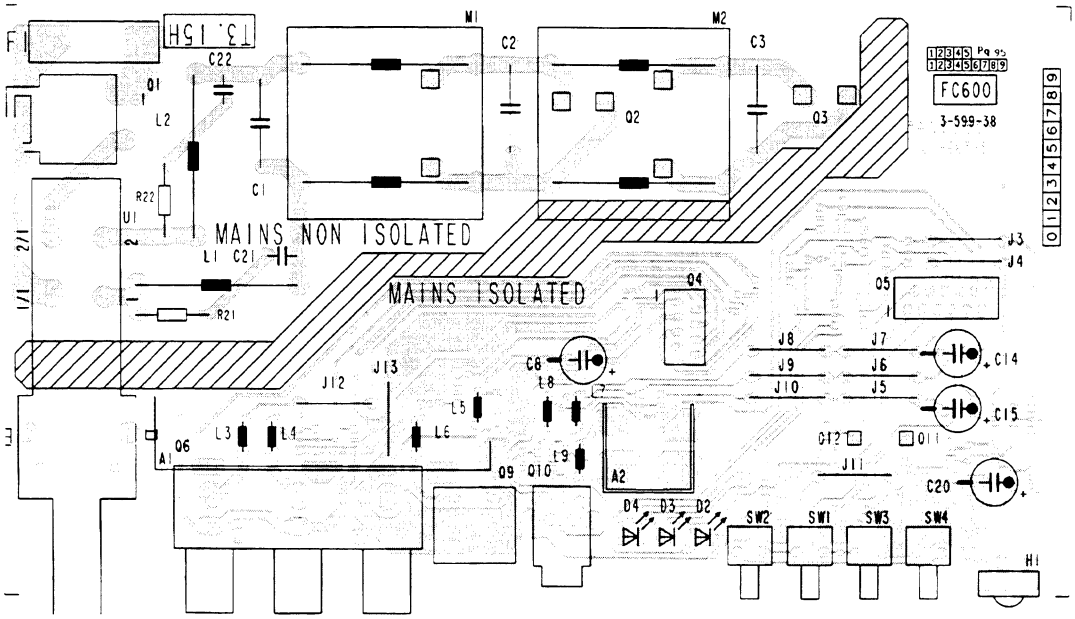
CF602 Combfilter module

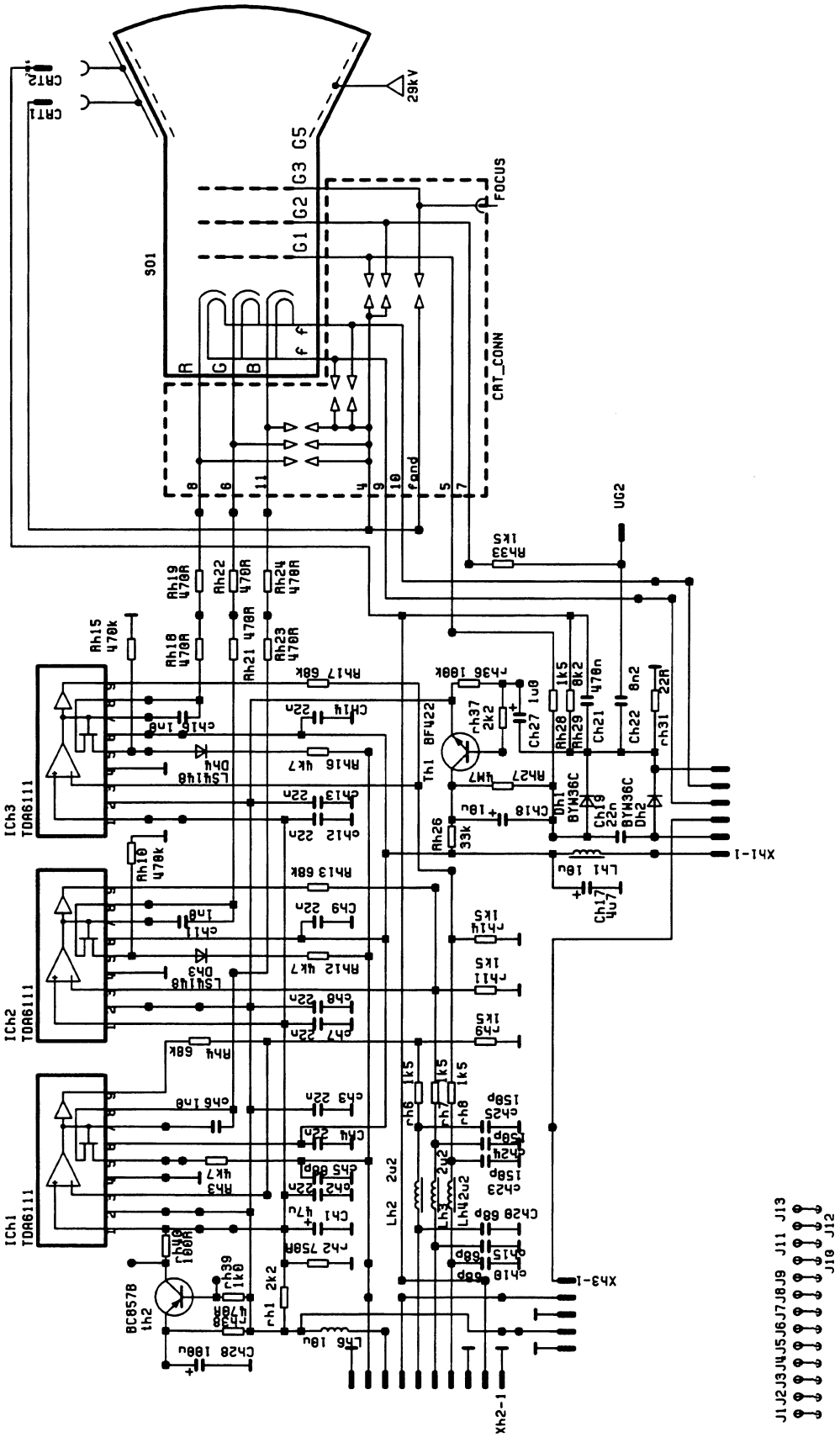




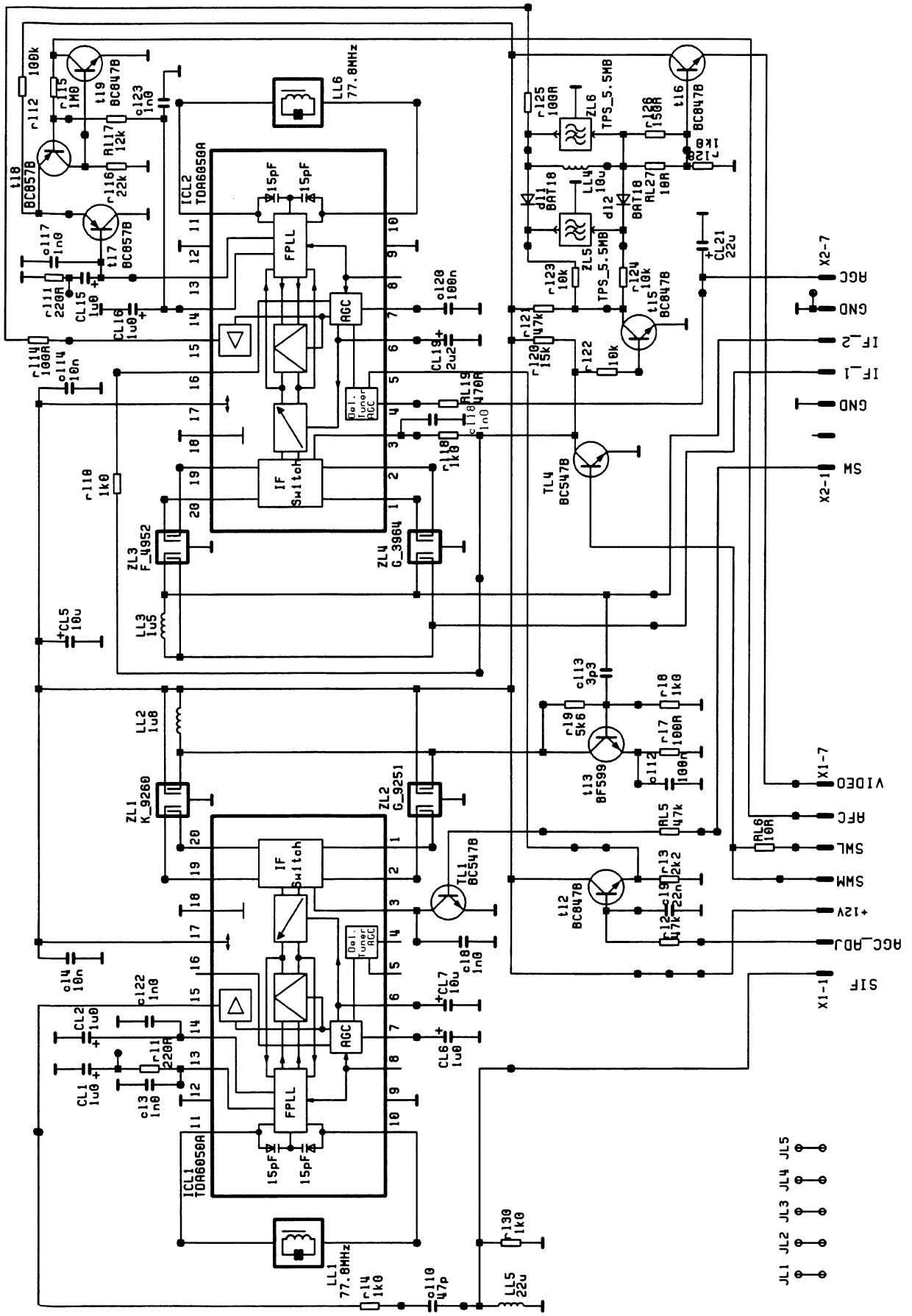
FC600 Control module



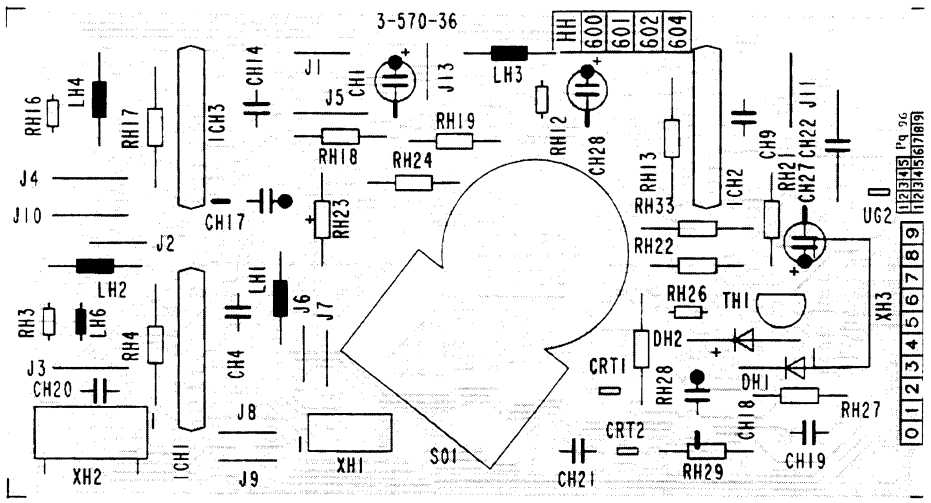


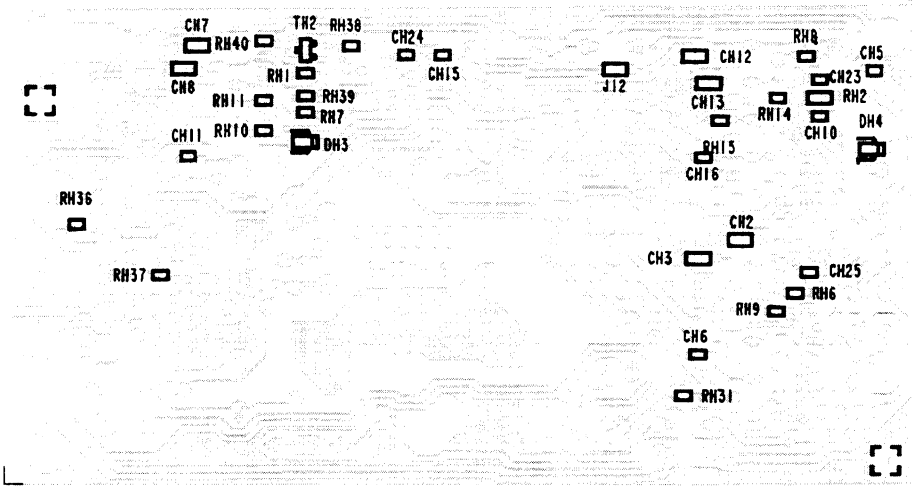

CRT2
CRT1
29kV
G3 G5
G2
G1
FOCUS
S01
R
G
B
f
CRT_CONN
8
6
11
4
9
10
fond
5
7
UG2
RH33 1K5
Rh19 470R
Rh22 470R
Rh24 470R
Rh18 470R
Rh21 470R
Rh23 470R
Rh15 470k
RH17 68k
Th1 BFW22
rh37 2k2
Ch27 1u0
rh36 100k
Rh28 1k5
Rh29 8k2
Ch21 470n
Ch22 8n2
rh31 22R
RH27 4M7
Dh1 BYW36C
Dh2 BYW36C
Ch19 22n
Ch18 10u
Rh26 33k
LH1 10u
Ch17 4u7
I-14X
ICh3 TDA6111
Rh10 470k
RH16 4k7
Dh4 LSU148
Ch14 22n
Ch13 22n
Ch12 22n
Ch11 1n8
RH13 68k
Ch9 22n
RH12 4k7
Dh3 LSU148
Ch8 22n
Ch7 22n
ICh2 TDA6111
RH4 68k
Ch6 1n8
Ch3 22n
Ch4 22n
RH3 4k7
Ch5 68p
Ch2 22n
Ch1 47u
Rh9 100R
rh39 1k0
BC857B Th2
rh1 2k2
Ch28 100u
LH5 10u
Rh8 1k5
Rh7 1k5
Rh6 1k5
Ch25 150p
Ch24 150p
Ch23 150p
Lh3 2u2
Lh4 2u2
Lh2 2u2
Ch29 68p
Ch15 68p
Ch18 68p
XH3-1
XH2-1
J1 J2 J3 J4 J5 J6 J7 J8 J9 J11 J13
J10 J12

LL600 IF-module

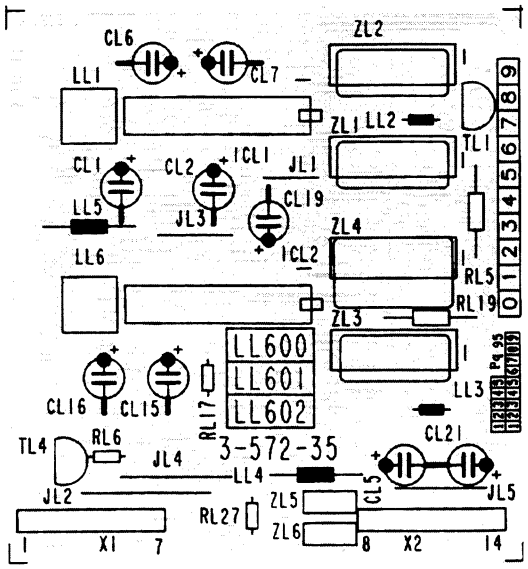


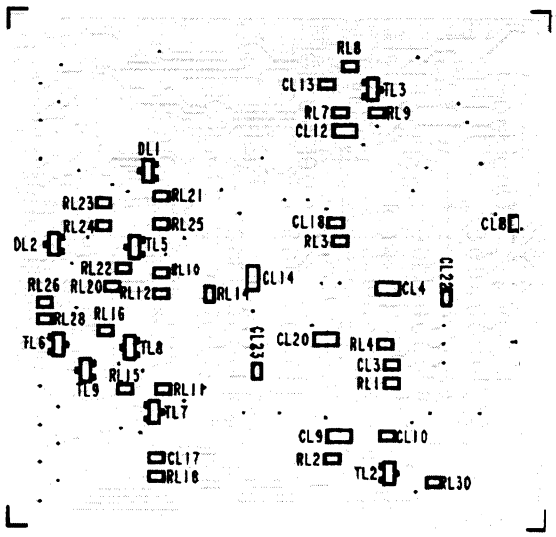
HH601/602/604 CRT-module



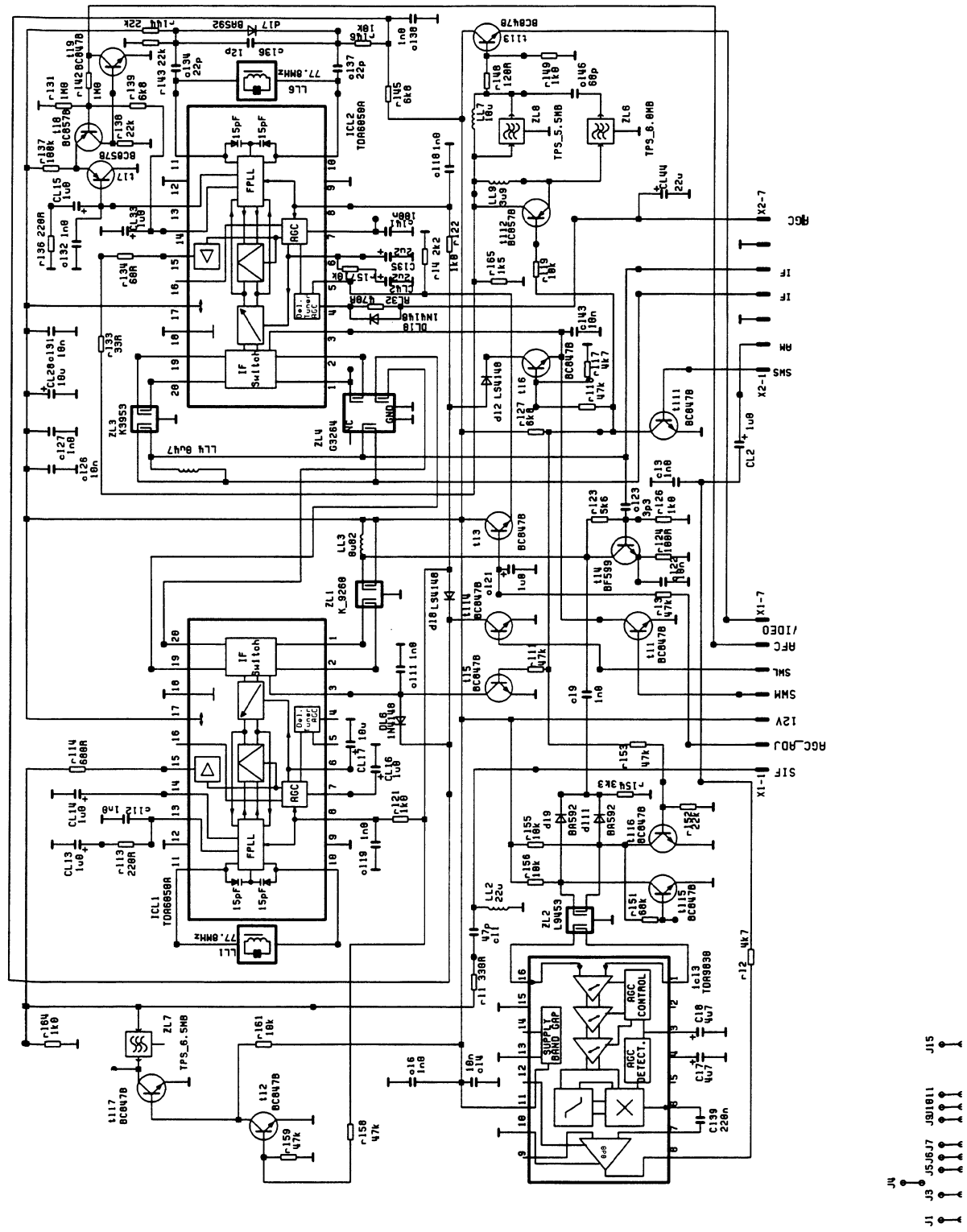


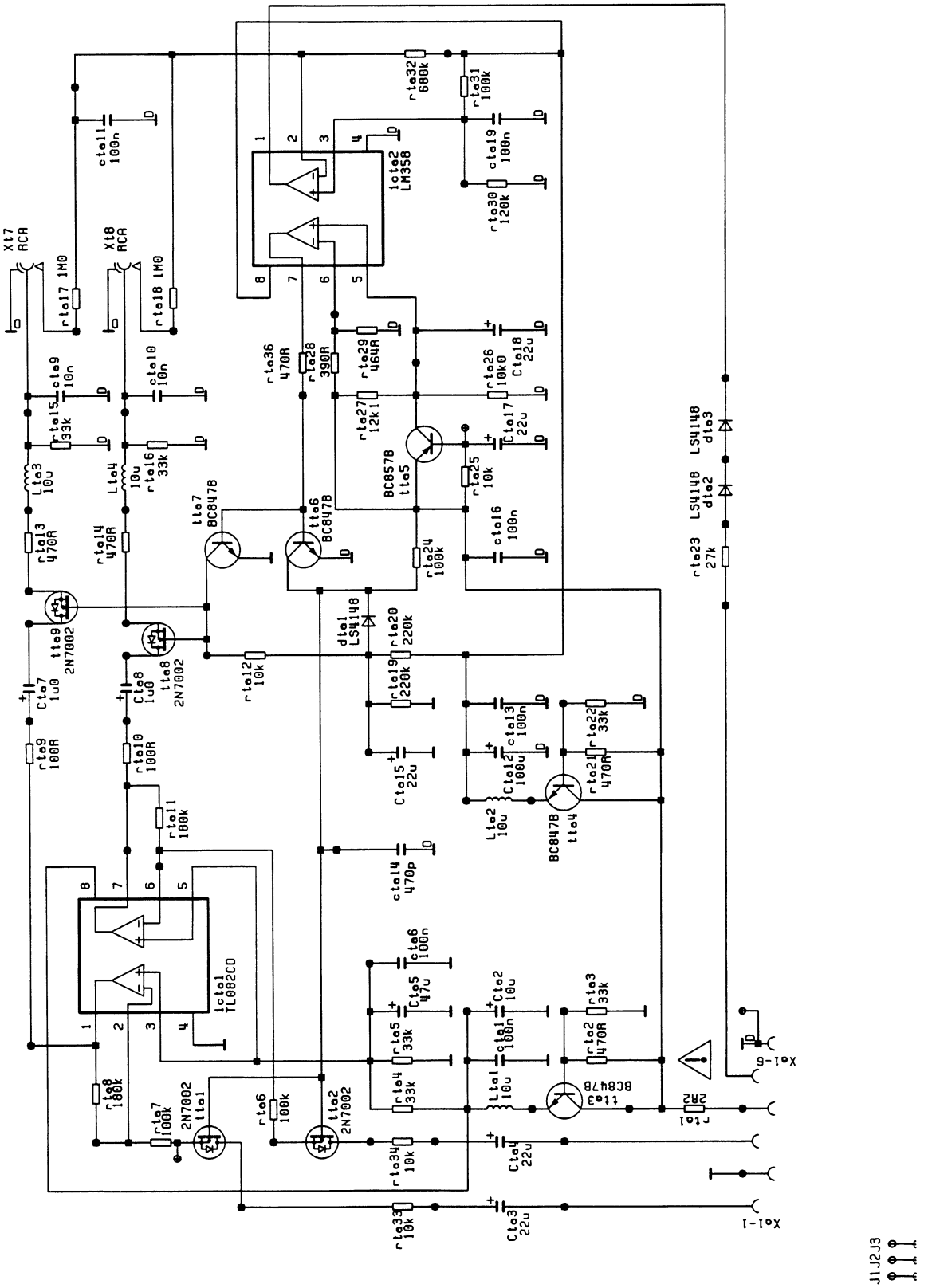
LL600 IF-module



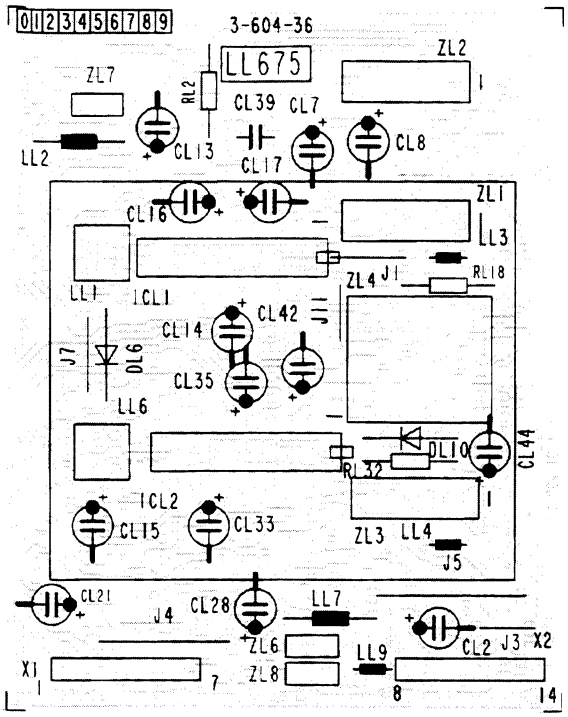


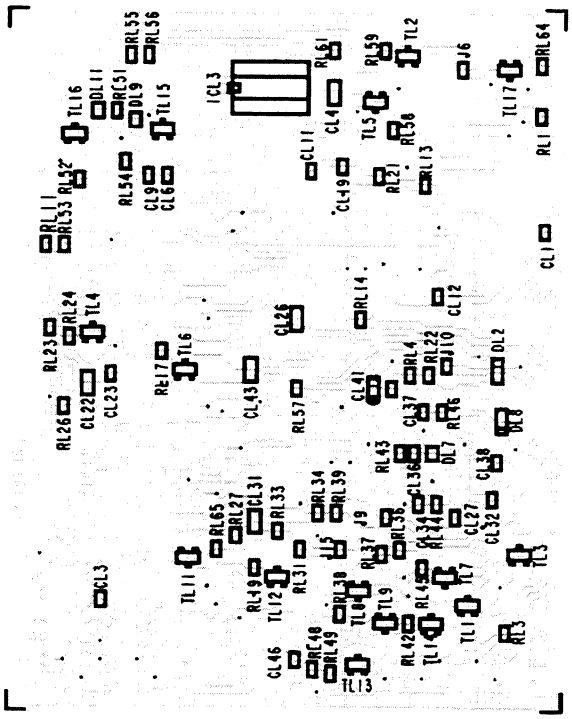
LL675 IF-module



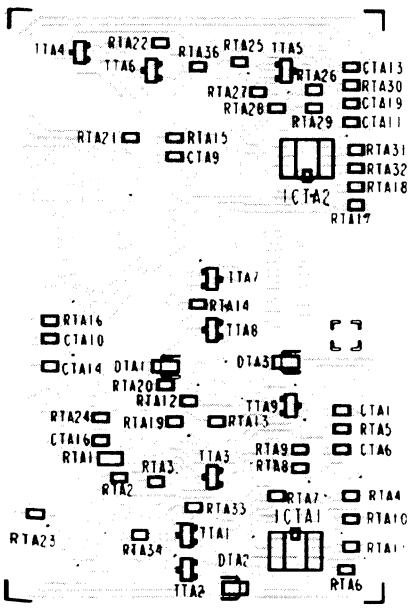


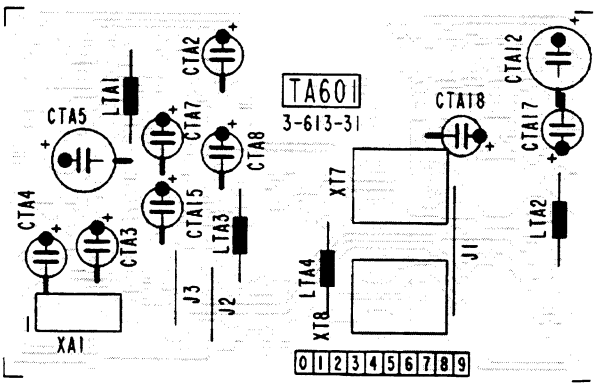
LL675 IF-module



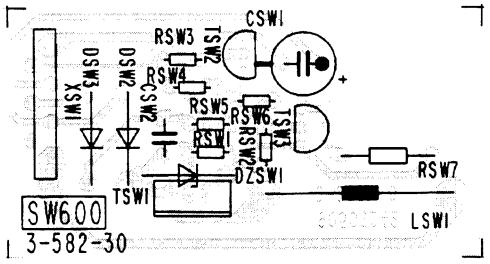


TA601 AUX-module

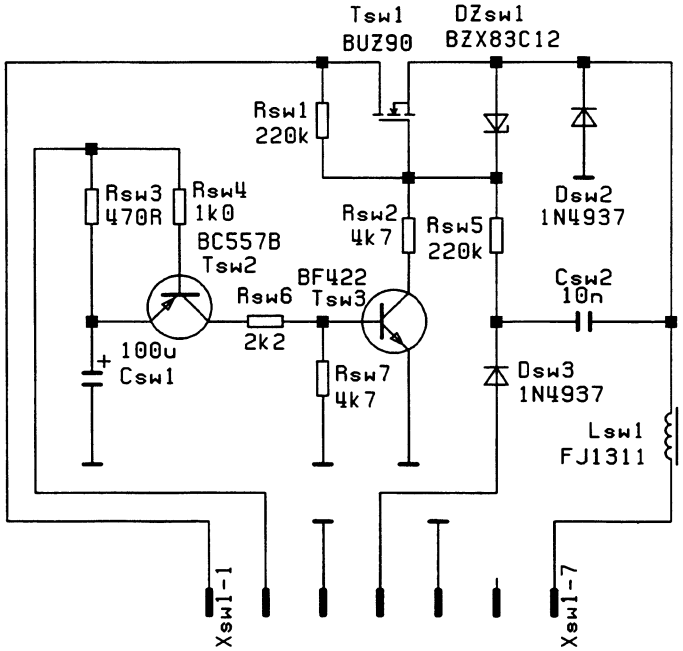




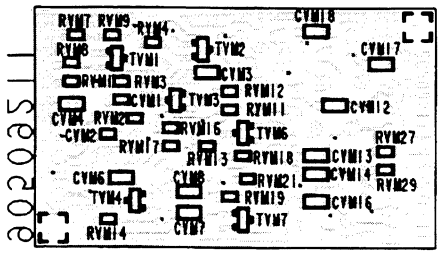
SW600 Switch module

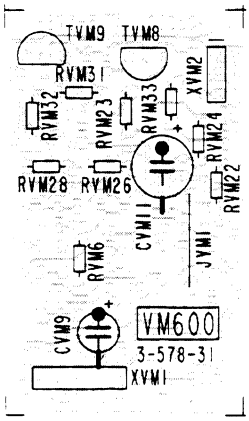


SW600 Switch module

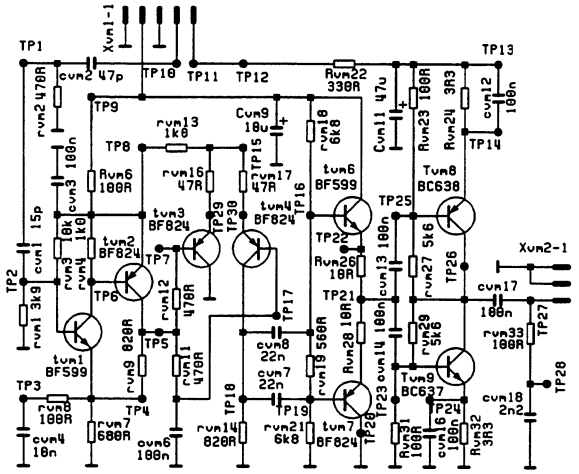


VM600 SVM-module

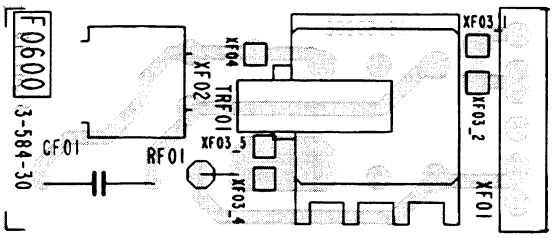




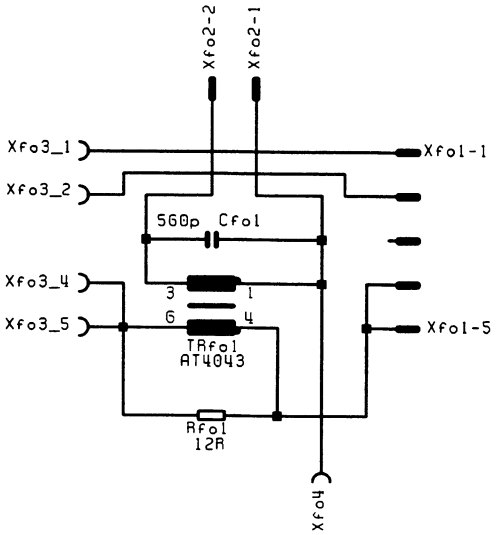
VM600 SVM-module



FO600 Dynamic focus module



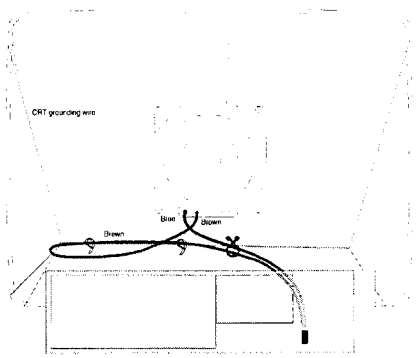
FO600 Dynamic focus module



SPARE PARTS ERSATZTEILE PIECES DE RECHANGE RESERVDELAR PARTI DI RICAMBIO

Note!

When servicing FX-set with deflection loop present, make sure that loop is shaped exactly like it was. See example below (100Hz 28")



⚠ Safety components in accordance with existing safety regulations. These components must be replaced only with original parts.
⚠ Sicherheitsbauteil im Sinn der Sherheitsbestimmung. Diese Teile dürfen nur durch Originalteile ersetzt erden.
⚠ Skyddskomponenter. Dessa komponenter får endast ersättas med original reservdelar.
⚠ Composant de sécurité conformément aux reglementations de sécurité. Ces composants doivent être uniquement remplacés par des piéces d'origines.
⚠ Componenti di sicurezza ai sensi del regolamento di sicurezza. Queste componenti devono venir sostituite unicamente con parti originali.

Main board

POWER BLOCK

RESISTORS

Item		Description	Order no.	PG
CO	76(FX/205)	SMD 4K7 5% 0W25	31425629	1
RK	1	CARF 100K 5% 0W25 FP	31630037	1
RK	2	CARF 1R5 5% 0W5 FP	31630014	2
RK	3	FUS V 4R7 5% 0W25	31860002	2
RK	4	FUS V 27R 5% 0W25	31860001	2
RK	7	CARF 1K0 5% 0W25	31660016	1
RK	8	CARF 150K 5% 0W25 FP	31630038	1
RK	9,19	FUS I 0R1 10% 0W4	31820003	2
RK	10	CARF 27K 5% 0W25 FP	31630035	1
RK	11,12,13,14,	CARF 5K6 5% 0W25 FP	31630028	1
RK	15	CARF 0R22 5% 0W25 FP	31514506	1
RK	16,51	CARF 18K 5% 0W25	31660040	1
RK	17	CARF 6K8 5% 0W25 FP	31630029	1
RK	20	FUS V 0R47 5% 0W5	31850004	2
RK	23	CARF 2R2 5% 0W25 FP	31514511	1
RK	24,25	CARF 150R 5% 0W25 FP	31630025	1
RK	27,44	SMD 1K0 5% 0W1	31425820	1
RK	28	CARF 100R 5% 0W25 FP	31514516	1
RK	30	CARF 1K5 5% 0W25 FP	31514523	1
RK	31,33,35,36(7195)	CARF 1R8 5% 0W25 FP	31514501	1
RK	32,34,37,40(7195)	CARF 1R5 5% 0W25 FP	31514512	1
RK	34	METOX 0R33 J 1W5	31430010	3
RK	36	METOX 0R47 J 1W5	31430011	3
RK	38	CARF 27R 5% 0W25	31660007	1
RK	39	FUS V 390R 10% 1W0	31850002	4
RK	41	CARF 100K 5% 0W25	31660030	1
RK	42	SMD 100K 5% 0W1	31425844	1
RK	43	SMD 150R 5% 0W1	31425812	1
RK	45	FUS V 27R K 1W0	31840003	3
RK	46,47,48	CARF 4K7 5% 0W25 FP	31514522	1
RK	50	CARF 39K 5% 0W25 FP	31630048	1
RK	53	SMD 47K 5% 0W1	31425836	1
RK	54 ⚠	FUS V 1R5 J 0W70	31840004	3
RK	55 ⚠	WRLAC 1R5 5% 4W0	31360002	5
RK	56,57	CARF 2k7 5% 0,25W FP	12601088	5
RK	58	CARF 15K 5% 0W25 FP	31630033	1
RK	60	SMD 10R 5% 0W1	31425810	1
RK	65 ⚠	CARF 6R8 5% 0W5	31660035	2
RNS	1	NTC R=33kohm	31910001	5
RO	1,30	WRLAC 1R5 5% 5W0	31360004	5
RO	2	CARF 56R 5% 0W25 FP	31630046	1
RO	3	METF 61K9 1% 0W6	31440013	1
RO	4	SMD 1K00 1% 0W1	31490056	1
RO	5	PTC Rs=24ohm DEGAUSSING	31940001	11
RO	6	SMD 220K 5% 0W1	31425847	1
RO	7,52	SMD 10K 5% 0W1	31425833	1
RO	8,9,11,15	CARF 22K 5% 0W25 FP	31630034	1
RO	10	SMD 562R F 0W10	31490081	1
RO	12	CARF 47K 5% 0W25 FP	31630049	1
RO	13	CARF 27R 5% 0W25 FP	31630021	1
RO	139,141	CARF 180K 5% 0W25 FP	31630039	1
RO	14,34	CARF 10K 5% 0W25	31660022	1
RO	16	WRLAC 33K 10% 9W0	31350002	8
RO	17	CARF 1K0 5% 0W25	31660016	1
RO	18	METF 0R47 5% 0W6	31440019	1
RO	20,29	METOX 220R 5% 4W0	31430004	4
RO	21,22	METF 0R27 5% 0W6	31440029	1
RO	23	CARF 15R 5% 0W25 FP	31630020	1
RO	24	METF 6K81 F 0W60	31450015	1
RO	26	CARF 39R 5% 0W25 FP	31630023	1
RO	27	SMD 1K0 5% 0W1	31425820	1
RO	28	COMP HV 10M 5% 0W5	31460001	3
RO	31	CARF 270R 5% 0W25	31660011	1
RO	32	CARF 10R 5% 0W25 FP	31514513	1
RO	36	SMD 22K 5% 0W1	31425837	1
RO	37	METF 120K 1% 0W6	31440016	1
RO	38	SMD 4K7 5% 0W1	31425824	1
RO	39,43,51	SMD 47K 5% 0W1	31425836	1
RO	42	METF 2K05 1% 0W6	31440020	1
RO	44	METF 56K2 1% 0W6	31440033	1
RO	45	TRIM HOR 1K0 20% 0W1	31230005	3
RO	46	METF 100K 1% 0W6	31440014	1
RO	47	CARF 390R 5% 0W25 FP	31630041	1
RO	48	METOX 10R 5% 2W0	31430001	2
RO	49	FUS V 2R2 5% 0W25	31860003	2
RO	50	METF 4K32 1% 0W6	31440026	1
RO	53	CARF 27R 5% 0W25 FP	31630021	1
RS	1	SMD 2K7 5% 0W1	31425821	1
RS	2,3	METF 1R21 1% 0W6	31450008	1
RS	4	SMD 120K 5% 0W1	31425845	1
RS	5	METF 1R54 1% 0W6	31450012	1
RS	6	SMD 8K2 5% 0W1	31425832	1
RS	7	CARF 22R 5% 0W25 FP	31514527	1
RS	10	SMD 1K0 5% 0W1	31425820	1
RS	11,12,16	CARF 1K8 5% 0W25 FP	31630040	1
RS	17	SMD 330K 5% 0W1	31425873	1
RS	18	SMD 12K 5% 0W1	31425834	1
RS	19	SMD 270K 5% 0W1	31425805	1
RS	21	SMD 47K 5% 0W1	31425836	1
RS	26	SMD 15K 5% 0W1	31425835	1

CAPACITORS

(FX/29)		CESMD 33P 5% 50V	32125507	1
CK	1	MKT 100N 10% 250V	33360003	3
CK	2	ELYT 4U7 20% 250V	34610001	4
CK	2,38 (7195)	ELYT 4U7 20% 250V	34610001	4
CK	3,18	CER 330P 10% 500V	32780002	1
CK	4	CER 2N2 20% 500V	32780003	1
CK	6	CER 150P 10% 500V	32780001	1
CK	7,8	MKC 330N 10% 250V	33660001	8

Item		Description	Order no.	PG
CK	9	ELYT 22U 20% 63V	34540026	1
CK	11	ELYT 2200U 20% 25V	34510005	11
CK	12,14,15	MKT 100N 10% 63V	33127106	2
CK	13	ELYT 100U 20% 25V	34540020	2
CK	16	CER 56P 5% 50V	32180001	1
CK	17	MKT 220N 10% 63V	33127108	3
CK	21,32	MKT 470N 10% 63V	33127123	3
CK	22	MKP 470P 2.5% 1K6V	33460011	6
CK	23	MKP 15N 2,5% 100V	33460003	5
CK	24 ⚠	MKP 13N 2,5% 1K6V	33460008	10
CK	24 ⚠ (7195)	MKP 11N 2,5% 1K6V	33460024	12
CK	25 ⚠	MKP 330P 10% 1K6V	33460017	4
CK	25 ⚠ (7195)	MKP 1N0 5% 1K6V	33460028	4
CK	26 ⚠	MKP 15N 2.5% 630V	33460012	9
CK	26 ⚠ (7195)	MKP 33N 2,5% 630V	33460023	10
CK	27 ⚠	MKP 390N 5% 250V	33460015	5
CK	27 ⚠ (7195)	MKP 560N 5% 250V	33460021	10
CK	29 ⚠	MKC 4U7 10% 63V	33660002	16
CK	31	MKT 220N 10% 63V	33127108	3
CK	36 ⚠ (7195)	MKT 330N 10% 63V	33127113	3
CO	1	MKT 220N 10% 400V	33360002	4
CO	3,4	CER 2N2 20% 400VAC	32960001	4
CO	6,7,8,9	CER 3N3 20% 1KV	32760001	2
CO	10	ELYT 220U 20% 385V	34260826	18
CO	11	MKP 33N 5% 1KV	33460016	5
CO	12	MKT 10N 5% 400V	33360006	2
CO	13	MKP 220P 5% 1K6V	33460009	4
CO	14	ELYT 2U2 20% 350V	34630001	5
CO	16	MKP 1N0 5% 63V	33480010	2
CO	17	MKT 680N 10% 63V	32124760	4
CO	18,29	CESMD 100P 5% 50V	32125515	1
CO	19,74	CESMD 220P 5% 50V	32125513	1
CO	21	CESMD 33N 20% 50V	32790010	2
CO	22	MKT 1U0 10% 63V	33124758	4
CO	23,26,43,62,64	CESMD 100N 10% 50V	32535920	1
CO	24	ELYT 100U 20% 35V	34510006	3
CO	28	MKT 470N 10% 63V	33127123	3
CO	31	MKP 330P 10% 1K6V	33460017	4
CO	32	MKT 100N 10% 250V	33360003	3
CO	33	ELYT 100U 20% 200V	34610006	15
CO	34,49	CER 330P 10% 500V	32780002	1
CO	36,41	ELYT 1000U 20% 35V	34510013	8
CO	37,39,40,46,51,71	MKT 100N 10% 63V	33127106	2
CO	38,44	CER 1N0 10% 500V	32780004	1
CO	42	CESMD 220N 80/20% 50V	32790014	2
CO	48,50,53,54	ELYT 1000U 20% 16V	34510004	7
CO	56	CER 1N5 20% 400VAC	32960002	4
CO	57,69	ELYT 10U 20% 63V	34540025	2
CO	58	CESMD 47N 10% 50V	32790008	1
CO	63	MKT 220N 10% 63V	33127108	3
CO	72	CESMD 470P 5% 50V	32190013	1
CO	73	CESMD 4N7 10% 50V	32790007	1
CO	76	ELYT 22U 20% 63V	34540026	1
CS	1	ELYT 10U 20% 63V	34540025	2
CS	2	ELYT 100U 20% 25V	34540020	2
CS	3	MKT 470N 10% 63V	33127123	3
CS	4	CESMD 680P 5% 50V	32190014	1
CS	5	CESMD 100P 5% 50V	32125515	1
CS	6	MKT 220N 10% 63V	33127108	3
CS	7,10	CESMD 100N 10% 50V	32535920	1
CS	8	CESMD 270P 5% 50V	32125529	1
CS	9	MKT 100N 10% 63V	33127106	2
TRANSISTORS				
TK	1	NPN BC547B 45V 100mA	36220002	1
TK	2	NPN BC637 60V 1A	36220003	3
TK	3	NPN PWR BU2525AF 1K5V	36270003	17
TK	4	PNP PWR 2SB1375 60V 3A	36270005	7
TK	6	PNP SMD BC857B 45V 100mA	36145412	2
TO	1	N-FET PWR IRFBC40 600V 8A	36370001	13
TO	4	N-FET SMD BUK483-60A 60V	36380001	8
TO	6,7	NPN SMD BC847B 45V 100mA	36145312	2
TO	8	NPN PWR 2SD1406 60V 3A	36270009	5
TO	9	PNP SMD BC857B 45V 100mA	36145412	2
TS	1	NPN SMD BC847B 45V 100mA	36145312	2

Item		Description	Order no.	PG
DIODES				
DK	1	RECT PWR BYV26C 600V 1.0A	36610005	4
DK	2,6	RECT PWR BYV36C 600V 1.6A	36575452	4
DK	3	RECT BYW98 200V 3A 7A	36575470	5
DK	4,5,11	1N4148 75V 200mA	36420002	1
DK	7	RECT PWR BY359F 1K5V 5A	36571465	11
DK	8	RECT PWR BY229F 800V 7A	36610004	9
DO	1,2,3,4	RECT PWR BY527 1K25V 2A	36610001	4
DO	6,7,8,9	RECT PWR 1N4937 600V 1.0A	36575353	2
DO	11	RECT BYM36D 800V 2.9A	36621551	8
DO	12,13	RECT BYW98 200V 3A 7A	36575470	5
DO	14,16	SCHOTTKY SB545S 45V 5A	36420003	6
DO	17,18,20,21	1N4148 75V 200mA	36420002	1
DS	1,2	1N4148 75V 200mA	36420002	1
ZENERS				
ZDK	1	Z BZX83B 30V 2%	36770005	1
ZDK	2	Z BZX83C 8V2 5%	36770003	1
ZDK	9	Z BZX83C 36V 5%	36770007	1
ZDO	1	Z SMD BZX84C 8V2 5%	36780003	2
INTEGRATED CIRCUITS				
ICO	1	PWR CONT TEA2262	37450002	14
ICO	2	PWR CONT TEA5170	37661173	13
ICO	3	V-REG PQ12RH11 12V 1.5A	37460007	12
ICO	4	V-REG LM2940CT 5V 1A	37681840	9
ICO	6	V-REG PQ05RH11 5V 1.5A	37460008	12
ICS	1	DEFL TDA8350Q-N4 DSP13P	37631427	19
FUSES				
FO	1 ⚠	F2,5A MINIATURE D=8,5	43770004	4
FO	2,3 ⚠	T2,0A MINIATURE D=8,5	43770005	4
COILS				
LK	2	LIN COIL FU1215	45380012	14
LO	1,2,5,6,7	EMI SUPPRES BEAD 3.5x9	45620007	3
LO	3,4	10UH 10%	45571699	5
TRANSFORMERS				
MK	1 ⚠	DST TRAFO Eldor 1182.9001D	45360020	31
MK	2	TRAFO FM2543	45380013	12
MK	3 ⚠	230uH FM2544	45610007	11
MO	2	MAINS TRAFO FM3600	45310002	23
MO	3	TRAFO FM2546	45380014	12
OTHERS				
DO	11	DI HEATSINK -2	81402597	1
DO	12,13	DI HEATSINK -2	81402596	1
FOKUS	1	FOCUS CABLE 1,2 410MM	96010142	7
FOKUS	2	ELDOR-DST CABLE 260MM	96010143	3
GROUNDING BRAID		BLADE CONNECTOR 2.8MM	41930001	1
TK	3;DK7,8	HEATSINK 2 100Hz	81403739	8
TK	3;DK7,8	TRANSISTOR HOLDER	81403207	6
TK	4;ICO3,6;ICS1	ADD. HEATSINK 3 100/50Hz	81403904	7
TK	4;ICO3,6;ICS1	HEATSINK 3 100/50Hz	81403747	8
TK	4;ICO3,6;ICS1	TRANSISTOR HOLDER	81403207	6
TO	1	HEATSINK 1 100/50Hz	81403722	7
TO	1	ISOLATOR TO-220	49000085	3
TO	1	TRANSISTOR HOLDER	81403207	6
U-DEM		ROW CONNECTOR 4-P	73190604	3
UG	2	SCREEN CABLE 460mm	96010141	7
XK	1	CONNECTOR HEADER 6-P	41710002	3
XK	2	ROW CONNECTOR 5-P	41710001	3
XO	2	ROW CONNECTOR 2-P	73184750	3
XS	1	ROW CONNECTOR 3-P	73190603	3
ADD.HEATSINK		PT-SCREW 3,5x6,5	62038859	1
CRT BLADE		CONNECTOR 2.8MM	41930001	1
		ANODE CABLE ELD	96008868	11
		FASTENING SLEEVE FOCUS	54041366	3
		FASTENING SLEEVE ANODE	54041417	3
		FOCUS CABLE 410mm,BLACK	96010152	9
		FOCUS CABLE 410mm,RED	96010142	7

Item		Description	Order no.	PG
RF-BLOCK				
RESISTORS				
JR	3,14188,146,153, 178,235,266	SMD 0R 5% 0W1	31425802	1
JR	180,182	SMD 470R 5% 0W1	31425817	1
JR	40,52,53	SMD 0R 5% 0W1	31425802	1
JR	43,79,81,83,91,92, 93,94,96,117,221	SMD 0R 5% 0W1	31425802	1
RA	1,9	SMD 1R0 5% 0W25	31490060	1
RA	2,7	SMD 1K5 5% 0W1	31425826	1
RA	3,8	SMD 33R 5% 0W1	31425808	1
RA	4,6	SMD 6K8 5% 0W1	31425831	1
RA	11,26,27,28,29, 44,45,58	SMD 100R 5% 0W1	31425852	1
RA	12,13,14,15,16, 17,48,49	SMD 33K 5% 0W1	31425840	1
RA	18	METOX 2R2 5% 4W0	31440010	4
RA	19,21,36,37,42,46	SMD 4K7 5% 0W1	31425824	1
RA	20,25,33,39	SMD 68K 5% 0W1	31425838	1
RA	22,23	SMD 270R 5% 0W1	31425855	1
RA	24	SMD 1K0 5% 0W1	31425820	1
RA	31	CARF 180R 5% 0W25 FP	31630026	1
RA	32,38,47	SMD 10K 5% 0W1	31425833	1
RA	34,41	CARF 47R 5% 0W25 FP	31514525	1
RA	43	SMD 100K 5% 0W1	31425844	1
RA	51,52,53,54,56,57	SMD 1M0 5% 0W1	31425801	1
RA	61	SMD 1R0 5% 0W1	31490020	1
RD	1	SMD 15K 5% 0W1	31425835	1
RD	2	SMD 82K 5% 0W1	31425843	1
RD	3,4	SMD 270R 5% 0W1	31425855	1
RD	7	SMD 0R 5% 0W1	31425802	1
RD	8	CARF 10K 5% 0W25	31660022	1
RD	11,12	SMD 10K 5% 0W1	31425833	1
RD	22,23	SMD 1K0 5% 0W1	31425820	1
RF	1,3,4,21,28,29	SMD 10K 5% 0W1	31425833	1
RF	2,33,34	SMD 1K0 5% 0W1	31425820	1
RF	6,7	SMD 270R 5% 0W1	31425855	1
RF	8,11,5,32	SMD 4K7 5% 0W1	31425824	1
RF	9,12,27,36	SMD 100R 5% 0W1	31425852	1
RF	17,18,19	SMD 220R 5% 0W1	31425815	1
RF	23,37,41	CARF 1K0 5% 0W25	31660016	1
RF	24,26,40	CARF 270R 5% 0W25	31660011	1
RF	31	SMD 12K 5% 0W1	31425834	1
RF	35	SMD 18K 5% 0W1	31425813	1
RQ	1	SMD 15K 5% 0W1	31425835	1
RQ	2,13,17,18,21,26, 28,29,31,32,49,58	SMD 470R 5% 0W1	31425817	1
RQ	3,64	SMD 4K7 5% 0W1	31425824	1
RQ	4	SMD 22K 5% 0W1	31425837	1
RQ	6,7,44,46,47	SMD 220R 5% 0W1	31425815	1
RQ	8,50	SMD 47K 5% 0W1	31425836	1
RQ	9,11,23,27,33, 36,43	SMD 75R 5% 0W1	31425861	1
RQ	10,24	SMD 68R 5% 0W1	31425876	2
RQ	12,37	CARF 15K 5% 0W25 FP	31630033	1
RQ	14,16,19,22,38, 39,41,42,70	SMD 100K 5% 0W1	31425844	1
RQ	48	FUS I 0R1 10% 0W4	31820003	2
RQ	51,62	CARF 1K0 5% 0W25 FP	31514519	1
RQ	52,53	SMD 270R 5% 0W1	31425855	1
RQ	54	CARF 47R 5% 0W25 FP	31514525	1
RQ	56,57	CARF 220R 5% 0W25	31660036	1
RQ	59	SMD 560R 5% 0W1	31425818	1
RQ	60	SMD 820R 5% 0W1	31425819	1
RQ	61	SMD 1K0 5% 0W1	31425820	1
RQ	63	CARF 22K 5% 0W25	31660025	1
RQ	71	SMD 10K 5% 0W1	31425833	1
RR	1	SMD 10K 5% 0W1	31425833	1
RR	2,14,16,17	SMD 1K0 5% 0W1	31425820	1
RR	3,4,6	SMD 3K9 5% 0W1	31425830	1
RR	7	SMD 470R 5% 0W1	31425817	1
RR	11,12,13	CARF 1K0 5% 0W25	31660016	1
RR	18	SMD 2R2 5% 0W1	31490066	1
RT	1,3,7	SMD 47R 5% 0W1	31425809	1
RT	2	SMD 560R 5% 0W1	31425818	1
RT	4,9	SMD 120R 5% 0W1	31425853	1
RT	6,28	SMD 470R 5% 0W1	31425817	1
RT	8	SMD 39R 5% 0W1	31425814	1
RT	11,23	SMD 47K 5% 0W1	31425836	1
RT	13,14,16	SMD 100R 5% 0W1	31425852	1
RT	15,12	SMD 56K 5% 0W1	31425842	1
RT	17,18	CARF 270R 5% 0W25	31660011	1
RT	19,10,20	SMD 1K0 5% 0W1	31425820	1
RT	21	SMD 330R 5% 0W1	31425857	1
RT	24	SMD 10K 5% 0W1	31425833	1
RT	25	SMD 2K2 5% 0W1	31425828	1
RT	26,27	SMD 220R 5% 0W1	31425815	1
RT	29	SMD 68R 5% 0W1	31425876	2
RT	30	SMD 3K9 5% 0W1	31425830	1
RT	31,32	SMD 1K5 5% 0W1	31425826	1
CAPACITORS				
CA	3	ELYT 470u 16V	25024009	6
CA	4,8,12,13,16,37, 47,57,62,73	CESMD 100N 10% 50V	32535920	1
CA	6	ELYT 3300U 20% 35V	34510009	10
CA	7	ELYT 47U 20% 16V	34540019	2
CA	9,11	ELYT 1000U 20% 25V	34510015	5
CA	14,17,59	CESMD 10N 10% 50V	32535918	1
CA	18,29	ELYT 1U0 20% 63V	34540022	2
CA	19,21	ELYT 2U2 20% 63V	34540023	2
CA	22,23,24,26	CESMD 1N0 10% 50V	32536203	1
CA	27,28,71,72	CESMD 390P 5% 50V	32190012	1
CA	30,33,34	CESMD 47P 5% 50V	32125508	1
CA	31,32	CESMD 1p2 5% 50V	23070585	3
CA	35,40,43,74,76	MKT 330N 10% 63V	33127113	3
CA	38,58	ELYT 220U 20% 16V	34510003	3
CA	41,49,56,60,65,68	ELYT 10U 20% 63V	34540025	2
CA	42	MKT 330N 10% 63V	33127113	3
CA	44,45	CESMD 470P 5% 50V	32190013	1
CA	46	ELYT 3U3 20% 63V	34540029	1
CA	48	ELYT 10U 20% 63V	34540025	2
CA	51,52,53,54,1,2	ELYT 22U 20% 35V	34540021	2
CA	55	MKT 10n 10% 63V	24030702	6
CA	63,64	MKT 100N 10% 63V	33127106	2
CA	66,67	CESMD 100P 5% 50V	32125515	1
CD	11	MKT 470N 10% 63V	33127123	3
CD	12,16	CESMD 3N3 10% 50V	32539908	1
CD	13,14,19,21,22,24, 26,27,28,29,31,32	CESMD 100N 10% 50V	32539920	1
CD	17,18	CESMD 18P 5% 50V	32125520	1
CD	23	ELYT 100U 20% 25V	34540020	2
CF	1,3,5,8	CESMD 100N 10% 50V	32539920	1
CF	2	ELYT 47U 20% 16V	34540019	2
CF	6,7	CESMD 33P 5% 50V	32125507	1
CF	10,13	CESMD 100P 5% 50V	32125515	1
CF	11	ELYT 10U 20% 63V	34540025	2
CF	12	CESMD 2N2 10% 50V	32539904	1
CQ	1,32,10,20	ELYT 10U 20% 63V	34540025	2
CQ	2,3,4,6,12,13	CESMD 390P 5% 50V	32190012	1
CQ	7,9,14,17	CESMD 330P 5% 50V	32125517	1
CQ	8,11,16,18,23	CESMD 10N 10% 50V	32539918	1
CQ	15	ELYT 100U 20% 25V	34540020	2
CQ	19,21,22,27,28,29	CESMD 100N 10% 50V	32539920	1
CQ	24,25,31	MKT 220N 10% 63V	33127108	3
CQ	26	ELYT 47U 20% 16V	34540019	2
CQ	36	CESMD 2N2 10% 50V	32539904	1
CR	1,2	CESMD 33P 5% 50V	32125507	1
CR	3,4,6,7,11,12,14	CESMD 100N 10% 50V	32539920	1
CR	8	ELYT 10U 20% 63V	34540025	2
CR	9	ELYT 22U 20% 35V	34540021	2
CR	10	MKT 470N 10% 63V	33127123	3
CR	13	ELYT 100U 20% 25V	34540020	2
CT	1,2,3,9,14,34,36, 37,41,44	CESMD 10N 10% 50V	32539918	1
CT	4,24,39	CESMD 100N 10% 50V	32539920	1
CT	6,11	CESMD 33P 5% 50V	32125507	1
CT	7,12,18	CESMD 68P 5% 50V	32125516	1
CT	8,13	CESMD 180P 5% 50V	32125524	1

Item		Description	Order no.	PG
CT	16	CESMD 18P 5% 50V	32125520	1
CT	17	CESMD 120P 5% 50V	32125523	1
CT	19	CESMD 47N 10% 50V	32790008	1
CT	21	ELYT 22U 20% 63V	34540026	1
CT	22	ELYT 1U0 20% 63V	34540022	2
CT	23	MKT 330N 10% 63V	33127113	3
CT	26,27,28	MKT 470N 10% 63V	33127123	3
CT	29	ELYT 10U 20% 63V	34540025	2
CT	31	ELYT 4U7 20% 63V	34540024	2
CT	40	MKT 1U0 10% 63V	33124758	4
CT	42,43	CESMD 390P 5% 50V	32190012	1
CT	47,48	CESMD 2N2 10% 50V	32535904	1
U	4	CESMD 100N 10% 50V	32535920	1
TRANSISTORS				
TA	3,6,7,8	NPN SMD BC847B 45V	36145312	2
TA	4	PNP SMD BC857B 45V	36145412	2
TD	3	NPN SMD BC847B 45V	36145312	2
TF	1,2	NPN SMD BC847B 45V	36145312	2
TQ	1,2	NPN BC547B 45V 100mA	36220002	1
TQ	3,4,6	NPN SMD BC847B 45V	36145312	2
TQ	5	PNP SMD BC857B 45V	36145412	2
TT	1,3	NPN SMD BC847B 45V	36145312	2
TT	2,4	PNP SMD BC857B 45V	36145412	2
DIODES				
DA	4	SMD LS4148 75V 200mA	36490002	1
DF	1	SMD LS4148 75V 200mA	36490002	1
ZENERS				
DR	1	Z BZX83C 3V3 5%	36770001	1
ZDA	1	Z BZX83B 8V2 2%	36770009	1
ZDA	1	Z SMD BZX84B 12V 2%	36780008	3
ZDQ	1	Z BZX83C 10V 5%	36770002	1
ZDQ	2,3	Z SMD BZX84C 8V2 5%	36780003	2
ZDT	3	Z BZX83B 30V 2%	36770005	1
INTEGRATED CIRCUITS				
ICA	1	AUDIO TDA7262	37430008	15
ICA	2	AUDIO MSP3410 TC24	37430005	31
ICA	3	OPAM MC33078N	37470006	7
ICD	1	VIDEO TDA9141-N2	37440006	27
ICD	3	VIDEO TDA4665-V3	37410008	14
ICF	1	EPROM 256Kx8	LM0816FTA30	31
ICF	2	EEPROM 2kx8 24LC16P	37860015	13
ICF	3	uP SMD SDA30C163	37850028	25
ICQ	1	VIDEO TEA6417	37440012	15
ICR	1	VIDEO SDA5273S/C26 SDIP52	37850058	33
ICR	2	DRAM 1Mx4 MCM54400	37860013	36
ICT	1	VIDEO TDA4780-V3	37440003	22
COILS				
J	7	EMI SUPPRES BEAD 3.5x9	45620007	3
LA	1	10UH 10%	45571699	5
LA	2	10UH 10% 230mA	45630002	3
LA	3	10UH 10% 230mA	45620003	3
LF	1,2,3	10UH 10% 230mA	45620003	3
LQ	1,2,3	2.2UH 10% 520mA	45630003	3
LQ	4,6	10UH 10% 230mA	45620003	3
LT	1,2	1,0uH	31301075	6
LT	3	1.8UH 10% 540mA	45620004	3
LT	4	10UH 10% 230mA	45620003	3
TA	1,2	LINE FILTER 2x5uH	45390004	5
CHRYSTALS				
ZA	1	18.432MHz HC-49/U	45730003	8
ZD	1	4433.619kHz HC-49/U	45730002	9
ZD	2	3.579545MHz HC-49/U	45730001	8
ZF	1	12.00MHz HC-49/U	45730005	8
ZR	1	20.48MHz HC-49/U	45730004	10
TUNER				
TU	1	TUNER SK1110 180/ltk	58231012	36
OTHERS				
AR/AA		CONNECTOR 4-P	51005748	6
DB-MODULE GND		HOLDER SCO 5308 S&N	54040724	2
ICA	1	HEATSINK 5 100/50HZ	81403760	8
ICA	1	TRANSISTOR HOLDER	81403207	6
ICF	1	IC SOCKET	41562101	11
ICF	1	IC-SOCKET 32-POLE DL	LZ0048	3
LOUDSPEAKER CABLE		ROW CONNECTOR 4-P	73190604	3
RGB,XATA		WIRE BUNDLE 6-P 200mm	96010040	10
SCART1		SCART CONNECTOR Black	41450292	7
SCART2		SCART CONNECTOR BLUE	41910004	7
XAAR		ROW CONNECTOR 9-P	73190609	3
XAAV,KQPP		ROW CONNECTOR 13-P	73190613	4
XD	2,XTPP	CONNECTOR HEADER 6-P	41710002	3
XEXTS		SPEAKER CONNECTOR 4-P	41450612	10
XFFC		CONNECTOR HEADER 12-P	41710004	4
XT	6	ROW CONNECTOR 6-P	73190506	3
XTDB 3, XTDB 2		ROW CONNECTOR 16-P	73190510	4
XTH		CONNECTOR HEADER 10-P	41710005	4
XTTA		CONNECTOR HEADER 8-P	41710003	3
		HEATSINK 6 100/50HZ	81403786	8
		CONNECTOR MODULAR 6-P	41910002	8

Item		Description	Order no.	PG

AJ602/603 Crossover module

CARF 3R9 5% 0W5 (AJ602)	31650001	2
METOX 1R5 5% 1W5	31450003	2
ELYT 2U2 20% 50V	34540016	4
ELYT 4U7 20% 50V	34540034	4
COIL 36-18	93002510	9
ROW CONNECTOR 2-P	73191101	2

AR602 Surround module

RESISTORS

RA	1,14,15,24,27,47	SMD 10K 5% 0W1	31425833	1
RA	2,4,34,35	SMD 220K 5% 0W1	31425847	1
RA	3,5,8,9	SMD 100R 5% 0W1	31425852	1
RA	6,7,10,17,19	SMD 100R 5% 0W1	31425852	1
RA	11,13	SMD 100K 5% 0W1	31425844	1
RA	12	SMD 2K2 5% 0W1	31425828	1
RA	16	SMD 4K7 5% 0W1	31425824	1
RA	18	SMD 10K 5% 0W1	31425833	1
RA	20	SMD 10R 5% 0W1	31425810	1
RA	23,25	SMD 12K 5% 0W1	31425834	1
RA	26	SMD 47K 5% 0W1	31425836	1
RA	28,33,37,42	SMD 47K 5% 0W1	31425836	1
RA	29,30	SMD 1K0 5% 0W1	31425820	1
RA	31	SMD 470R 5% 0W1	31425817	1
RA	32	SMD 1K5 5% 0W1	31425826	1
RA	36	SMD 150R 5% 0W1	31425812	1
RA	38,39	SMD 68R 5% 0W1	31425876	2
RA	40,41	SMD 2K7 5% 0W1	31425821	1
RA	43,44	SMD 1R0 5% 0W1	31490020	1
RA	45,46	SMD 1K0 5% 0W1	31425820	1

CAPACITORS

CA	1,2,3,5,6,7,8,9, 13,18,27,39	CESMD 100N 20% 50V	32790011	1
CA	10	MKT 220N 10% 63V	33127108	3
CA	11,45,46	CESMD 10N 10% 50V	32535918	1
CA	12,42	ELYT 10U 20% 63V	34540025	2
CA	14	CESMD 1N0 10% 50V	32536203	1
CA	15	MKT 470N 10% 63V	33127123	3
CA	16	CESMD 100P 5% 50V	32125515	1
CA	17,20	CESMD 100N 20% 50V	32790011	1
CA	19,23,33	ELYT 220U 20% 35V	34510008	4
CA	21	CESMD 100P 5% 50V	32125515	1
CA	22,35	ELYT 100U 20% 25V	34540020	2
CA	26,32,34,30	ELYT 2U2 20% 63V	34540023	2
CA	28	ELYT 47U 20% 50V	34540028	2
CA	29,31	CESMD 470P 5% 50V	32190013	1
CA	36,37	ELYT 47U 20% 50V	34540028	2
CA	38,44	ELYT 1000U 20% 35V	34510013	8
CA	40,41	MKT 100N 10% 63V	33127106	2
CA	43	ELYT 470U 20% 50V	34510007	11

TRANSISTORS

TA	1,10	NPN SMD BC847B 45V	36145312	2
TA	2	N-FET SMD 2N7002 60V	36380002	4
TA	3,4,5,6	N-FET SMD 2N7002 60V	36380002	4
TA	7,8	NPN SMD BC847B 45V	36145312	2
TA	9	PNP SMD BC857B 45V	36145412	2

DIODES

DA	1,5	SMD BAV70 70V 215mA	36561954	2
DA	2,3	SMD BAV70 70V 215mA	36561954	2
DA	4	Z DI SMD BZX84B 12V 2%	36780008	3

Item		Description	Order no.	PG

INTEGRATED CIRCUITS

ICA	1	AUDIO SMD DSP56004	37850029	35
ICA	2	SRAM SMD 32kx8	37860025	22
ICA	3	PLL SMD TC9246F	37410015	13
ICA	4	DAC SMD TC9270F	37880010	20
ICA	6	SPECI SMD TA2009F	37410016	13
ICA	7	AUDIO TDA7262	37430008	15

COILS

LA	1	120UH 5% 300mA	45630007	3
LA	3,4	LINE FILTER 2x5uH	45390004	5
LA	2	10UH 10% 230mA	45630002	3

OTHERS

SW	1	PUSH-BUTTON SWITCH	41220002	15
Q	1,3,4	ROW CONNECTOR 4-PIN	73190604	3
Q	2	MODULE CONNECTOR 9-PIN	41720002	6
Q	6,7	SPEAKER CONNECTOR	41910003	5
		DPL-WIRE BUNDLE L=130	96010163	8
		HEATSINK 50mm	81403777	15
		MODULE HOLDER	54041342	4
		MODULE SUPPORT	80400280	3
		MODULE SUPPORT AR600	81403860	4
		PT-SCREW 2,9x6,5	62038955	3
		SCREW 3X8	61003204	4
		WIRE BUNDLE SURROUND	96010127	9

AV601 Subwoofer module

RESISTORS

J	5,6,7,10	SMD 0R 5% 0W1	31425802	1
R	1,7,9,12,24, 38,40	SMD 150K 5% 0W1	31425846	1
R	2,3,6,15,16,17, 18,19,21,37	SMD 33K 5% 0W1	31425840	1
R	4,5,39	SMD 4K7 5% 0W1	31425824	1
R	8	SMD 22K 5% 0W1	31425837	1
R	10	SMD 220K 5% 0W1	31425847	1
R	13,14	SMD 470R 5% 0W1	31425817	1
R	22,27	SMD 47R 5% 0W1	31425809	1
R	23	SMD 220R 5% 0W1	31425815	1
R	25,28	SMD 1K8 5% 0W1	31425827	1
R	26,34,36	SMD 1K5 5% 0W1	31425826	1
R	29,30	SMD 1R0 5% 0W1	31490020	1
R	31,32	SMD 470K 5% 0W1	31425848	1
R	33,35	SMD 47K 5% 0W1	31425836	1
RA	11	SMD 150k 5% 0,125W	12832225	5
RAV	20	SMD 10K 5% 0W1	31425833	1
RAV	41	SMD 10R 5% 0W1	31425810	1

CAPACITORS

C	1,2,3,4,8,9	CESMD 47N 10% 50V	32790008	1
C	5	CESMD 1N0 10% 50V	32536203	1
C	6,12	ELYT 100U 20% 25V	34540020	2
C	7,10,18,19,20	CESMD 100N 10% 50V	32539220	1
C	13,15,22,23,26	ELYT 1U0 20% 50V	34540030	1
C	16,17	ELYT 22U 20% 35V	34540021	2
C	21	ELYT 10U 20% 63V	34540025	2
C	24,25	CESMD 6N8 5% 50V	32790013	1
C	27	ELYT 1000U 20% 16V	34540015	6

TRANSISTORS

T	1,3,4,5	NPN SMD BC847B 45V 100mA	36145312	2
T	2,6	PNP SMD BC857B 45V 100mA	36145412	2
T	7	N-FET SMD 2N7002 60V	36380002	4

Item		Description	Order no.	PG
DIODES				
DAV	1,2	DI 1N4148 75V 200mA	36420002	1
ZENERS				
Z	1	Z SMD BZX84B 12V 2%	36780008	3
INTEGRATED CIRCUITS				
IC	1,2	OPAM SMD MC33078D	37470007	7
IC	3	LOGIC SMD 4053B	37715194	6
IC	4	AUDIO TDA7262	37430008	15
OTHERS				
X	1	MODULE CONNECTOR 13-P	41720003	6
X	2	CONNECTOR ROW 3-P	73186454	3
		FASTENING SPRING	54040762	1

CF602 Combfilter module

RESISTORS				
JC	10,12,13	SMD 0R J 0W25	31425601	1
RC	1	SMD 47K 5% 0W1	31425836	1
RC	2,24	SMD 100R 5% 0W1	31425852	1
RC	3,5,7,18	SMD 10K 5% 0W1	31425833	1
RC	4	SMD 3K3 5% 0W1	31425829	1
RC	6,16	SMD 220R 5% 0W1	31425815	1
RC	8,9	SMD 2K2 5% 0W1	31425828	1
RC	10	SMD 22K 5% 0W1	31425837	1
RC	11,23	SMD 470R 5% 0W1	31425817	1
RC	12,15,14	SMD 1K0 5% 0W1	31425820	1
RC	13	SMD 390R 5% 0W1	31425816	1
RC	17	SMD 560R 5% 0W1	31425818	1
RC	19	SMD 820K 5% 0W1	31425885	1
RC	20	SMD 330R 5% 0W1	31425857	1
RC	21,25,26	SMD 100K 5% 0W1	31425844	1
RC	22	SMD 120K 5% 0W1	31425845	1
CAPACITORS				
CC	1	CESMD 470P 5% 50V	32190013	1
CC	2,6,13,18,19,22, 26,28,29,32	CESMD 100N 10% 50V	32535920	1
CC	3,11	CESMD 10P 5% 50V	32125506	1
CC	4	CESMD 16P 5% 50V	32190029	1
CC	5	CESMD 1N0 2% 50V	32190023	3
CC	12,17,21,33	ELYT 47U 20% 50V	34540028	2
CC	23,34,41	ELYT 10U 20% 63V	34540025	2
CC	24,27	ELYT 4U7 20% 63V	34540024	2
CC	31	CESMD 470N 80/20% 50V	32790012	2
CC	35,36	CESMD 56P 5% 50V	32125526	1
CC	38	CESMD 68P 5% 50V	32125516	1
TRANSISTORS				
TC	3,7,9	NPN SMD BC847B 45V	36145312	2
TC	4,6,8	PNP SMD BC857B 45V 100mA	36145412	2
TC	5	NPN SMD BF599 25V 25mA	36280003	4
NTEGRATED CIRCUITS				
IC	1	VIDEO SMD MC44144	37440015	13
IC	2	LOGIC SMD 4053B	37715194	6
IC	3	VIDEO MC141625	37791115	27
CHRYSTALS				
ZC	1	17.734475 MHZ HC49/U C	44213136	11

Item		Description	Order no.	PG
COILS				
LC	1,2,5,6	15UH 10% 610mA	45630004	3
LC	3	10UH 10% 230mA	45630002	3
LC	4	6,8 uH	31301068	6
OTHERS				
QC	1	F-CONNECTOR 13-PIN	41750002	7

DB600 Feature module

RESISTORS				
RDB	1,23,24,30,31	SMD 47K 5% 0W1	31425836	1
RDB	2,3,4,46,47,84	SMD 100R 5% 0W1	31425852	1
RDB	5	SMD 8K2 5% 0W1	31425832	1
RDB	6	SMD 3K9 5% 0W1	31425830	1
RDB	7	SMD 75R 5% 0W1	31425861	1
RDB	8,88	SMD 10R 5% 0W1	31425810	1
RDB	10	SMD 4K7 5% 0W1	31425824	1
RDB	11,58,63,64	SMD 10K 5% 0W1	31425833	1
RDB	12,71	SMD 10R 5% 0W1	31425810	1
RDB	13,14,20,21,33, 34,40,41	SMD 47K 5% 0W1	31425836	1
RDB	15,35	SMD 22R 5% 0W1	31425849	1
RDB	16,18,22,36,38	SMD 470R 5% 0W1	31425817	1
RDB	17,19,39,44,77, 79,91,92	SMD 220R 5% 0W1	31425815	1
RDB	25	SMD 22R 5% 0W1	31425849	1
RDB	26,28,32	SMD 470R 5% 0W1	31425817	1
RDB	27	SMD 300R 5% 0W1	31425856	1
RDB	29,43,45,76, 78, 93	SMD 220R 5% 0W1	31425815	1
RDB	37,75	SMD 180R 5% 0W1	31425854	1
RDB	42	SMD 560R 5% 0W1	31425818	1
RDB	49,54,55,56, 57,105	SMD 2K2 5% 0W1	31425828	1
RDB	50,51,52,53,65,85	SMD 2K2 5% 0W1	31425828	1
RDB	59,60,66,67,70	SMD 4K7 5% 0W1	31425824	1
RDB	61,62	SMD 1K2 5% 0W1	31425822	1
RDB	68,86	SMD 1K0 5% 0W1	31425820	1
RDB	69	SMD 33K 5% 0W1	31425840	1
RDB	72,89	SMD 1K5 5% 0W1	31425826	1
RDB	73,90	SMD 2K7 5% 0W1	31425821	1
RDB	74	SMD 150R 5% 0W1	31425812	1
RDB	81	SMD 100K 5% 0W1	31425844	1
RDB	82	SMD 8K2 5% 0W1	31425832	1
RDB	83	SMD 3K9 5% 0W1	31425830	1
RDB	87	SMD 120K 5% 0W1	31425845	1
RDB	94,95	SMD 100R 5% 0W1	31425852	1
RDB	96,102	SMD 39K 5% 0W1	31425841	1
RDB	97	SMD 820R 5% 0W1	31425819	1
RDB	98	SMD 3K3 5% 0W1	31425829	1
RDB	99,110	SMD 10K 5% 0W1	31425833	1
RDB	xxxx	SMD 470R J 0W25	31425615	1
RDB	100	SMD 22K 5% 0W1	31425837	1
RDB	101	SMD 33K 5% 0W1	31425840	1
RDB	103,104	SMD 1K0 5% 0W1	31425820	1
RDB	111,112,115,116	SMD 200R 5% 0W1	31490067	2
RDB	113	SMD 15K 5% 0W1	31425835	1
RDB	114	SMD NET 8x4K7 5% 0W1	37250001	7
RDB	117,118	SMD 200R 5% 0W1	31490067	2
CAPACITORS				
CDB	1,16,17	ELYT 1U0 20% 63V	34540022	2
CDB	2	ELYT 47U 20% 16V	34540019	2
CDB	3,4,8,11,30, 40,49,51	ELYT 100U 20% 25V	34540020	2
CDB	5,7,10,12,15,23, 24,27,47,118,129	CESMD 100N 10% 50V	32535920	1
CDB	6,26,28,38,48,69, 72,82,98	ELYT 22U 20% 35V	34540021	2

Item	Description	Order no.	PG
CDB 9,13,14,18,19,25, 31,37,52,60,94	CESMD 100N 10% 50V	32535920	1
CDB 20,21,22,131	CESMD 1N0 10% 50V	32536203	1
CDB 29,75,50	CESMD 10N 10% 50V	32535918	1
CDB 32,55	CESMD 82P 5% 50V	32125531	1
CDB 33	CESMD 10P 5% 50V	32125506	1
CDB 34	CESMD 120P 2% 50V	32190018	2
CDB 35,56	CESMD 27P 5% 50V	32125509	1
CDB 36,57,80,81,96,97	CESMD 68P 5% 50V	32125516	1
CDB 39	CESMD 10N 10% 50V	32535918	1
CDB 41,87,85	CESMD 100N 10% 50V	32535920	1
CDB 42,132	CESMD 82P 5% 50V	32125531	1
CDB 43	CESMD 10P 5% 50V	32125506	1
CDB 44	CESMD 120P 2% 50V	32190018	2
CDB 45	CESMD 27P 5% 50V	32125509	1
CDB 46	CESMD 68P 5% 50V	32125516	1
CDB 53	CESMD 33P 5% 50V	32125507	1
CDB 54,93	CESMD 5P6 5% 50V	32190017	1
CDB 58	CESMD 22P 5% 50V	32125521	1
CDB 59	CESMD 18P 5% 50V	32125520	1
CDB 61,63,83,86,99	CESMD 3P9 5% 50V	32190015	1
CDB 62,84,88	CESMD 3P9 5% 50V	32190015	1
CDB 64	ELYT 2U2 20% 63V	34540023	2
CDB 65,66	CESMD 22P 5% 50V	32125521	1
CDB 67,68,70,71,78, 123,125,127,128	CESMD 100N 10% 50V	32535920	1
CDB 73,74,112,113, 114,116,122, 124,126	CESMD 100N 10% 50V	32535920	1
CDB 76	CESMD 2N7 20% 50V	32535913	1
CDB 77	CESMD 330P 5% 50V	32125517	1
CDB 79	CESMD 820P 5% 50V	32190016	1
CDB 89	CESMD 2N2 10% 50V	32535904	1
CDB 90	CESMD 47N 10% 50V	32790008	1
CDB 91	ELYT 4U7 20% 63V	34540024	2
CDB 95	CESMD 470P 5% 50V	32190013	1
CDB 100,103,104,106, 107,108,109, 110,111	CESMD 100N 10% 50V	32535920	1
CDB 101,102,105,115, 117,119,120,121	CESMD 100N 10% 50V	32535920	1
CDB 130	CESMD 100P 5% 50V	32125515	1
TRANSISTORS			
TDB 1,15	NPN SMD BC847B 45V	36145312	2
TDB 10,11	PNP SMD BF550 40V 25mA	36120725	4
TDB 4,5	NPN SMD BFS20 20V 25mA	36120719	3
TDB 6,7,2,3	NPN SMD BFS20 20V 25mA	36120719	3
TDB 9,8,13,14	NPN SMD BC847B 45V	36145312	2
DIODES			
DDB 1,2,3,7	SMD BAS16 75V 250mA	36560318	2
DDB 4,6	SMD BBY40 4.3/6pF 25/3V	36730001	5
DDB 8	SMD LS4148 75V 200mA	36490002	1
INTEGRATED CIRCUITS			
ICDB 1	V-REG PQ05RH11 5V 1.5A	37460008	12
ICDB 2	DAC SMD TDA8444	37880006	16
ICDB 3,5	MEM SMD TMS4C2970	37860039	37
ICDB 4	VIDEO SMD SAA4940H-V1	37440008	27
ICDB 6	VIDEO SMD SAA7158-V3	37440009	34
ICDB 7,12,23	V-REG LM2936Z 5V 50mA	37681831	9
ICDB 8	ADC SMD SDA9205-2	37880003	27
ICDB 9	VIDEO SMD SAA4951-V1B	37440014	25
ICDB 10	uC SMD P83C652FBA/060	37850076	23
ICDB 11	LOGIG SMD 74F04	37840004	6
ICDB 13	LOGIC SMD 4066B	37840005	5
ICDB 14	LOGIC SMD 74F08	37840002	6
ICDB 15	LOGIC SMD 74F157	37840008	12
ICDB 16	LOGIC SMD 74F175	37840006	8
ICDB 17	LOGIC SMD 74F00	37810001	5
ICDB 18	LOGIC SMD 74HCT4020	37830003	8
ICDB 19	LOGIC SMD 74F86	37840007	8
ICDB 20	LOGIC SMD 74HCT4046A	37840003	12
ICDB 21	LOGIC SMD 74F08	37840002	6
ICDB 22	DEFL TDA9151B-N3	37450001	25
COILS			
LDB 1	10UH 10%	45571699	5
LDB 2	SMD 10UH 10% 320mA	45640003	6
LDB 3,17	SMD 10UH 10% 180mA	45640002	5
LDB 4	SMD 10UH 10% 180mA	45640002	5
LDB 5	SMD 10UH 10% 90mA	45640004	6
LDB 6	SMD 18uH	31306686	6
LDB 7,11,10	SMD 15UH 10% 5mA	45572601	5
LDB 8	SMD 18uH	31306686	6
LDB 9	SMD 15UH 10% 5mA	45572601	5
LDB 12,16	SMD 12UH 10% 15mA	45640005	5
LDB 13	ADJ 0,47UH	45530009	5
LDB 14,15	ADJ 1,6UH	45530010	5
FILTERS			
ZDB 1	EMIFIL SMD 4N7 -20/+80%	45690003	6
CHRYSTALS			
KDB 1	12.00MHz HC-49/U	45730005	8
OTHERS			
Q 101,102	MODULE CONNECTOR 16-P	41458102	8
Q 103	MODULE CONNECTOR 6-P	41720001	5
	COVER FUTURE BOX	81403791	6
	BOTTOM FUTURE BOX	81403808	5
	FRAME-2 FUTURE BOX	81403823	6
	FRONT PANEL-2	81403816	4

FC600 Control module

RESISTORS			
J 1	SMD 0R J 0W25	31425601	1
J 14,17	SMD 0R 5% 0W1	31425802	1
R 1,2,10,17	SMD 47K 5% 0W25	31425639	1
R 3,4	SMD 75R 5% 0W25	31425669	1
R 8,9	SMD 270R J 0W25	31425613	1
R 11,16,18	SMD 15K 5% 0W25	31425637	1
R 12,7	SMD 1K0 J 0W25	31425622	1
R 13	SMD 330R J 0W25	31425614	1
R 14	SMD 100K 5% 0W25	31425646	1
R 15,19,20	SMD 10K 5% 0W25	31425635	1
R 21,22	CARF 2K2 5% 0W25	31660037	1
CAPACITORS			
C 1,2	MP/P 100N M 250VAC	33260001	4
C 5,7	CESMD 4N7 10% 50V	32790007	1
C 8,20	ELYT 10U 20% 35V	34540027	2
C 10,13	CESMD 390P 5% 50V	32125646	2
C 11	CESMD 1N0 10% 50V	32535901	1
C 14,15	ELYT 100U 20% 25V	34540020	2
C 16,17,18,19	CESMD 10N 10% 50V	32535918	1
C 21,22	CER 15P 5% 50V	32180003	1
TRANSISTORS			
T 2,4	PNP SMD BC857B 45V	36145412	2
T 3	NPN SMD BC847B 45V	36145312	2
DIODES			
D 1	SMD BAV70 70V 215mA	36561504	2
D 2	LED GREEN 5mm	36910005	3

Item		Description	Order no.	PG
D	3,4	LED RED 5mm	36910004	3
INTEGRATED CIRCUITS				
IC	1	IR-RECEIVER	36940001	14
SWITCH				
SW	1,2,3,4	TACTILE SWITCH	41150685	9
SW	1	MAINS SWITCH 250V 4/80A	41210005	12
COILS				
L	1,2	56UH 20% 1.5A	45620009	6
L	3,4,7,8,9	10UH 10% 230mA	45630002	3
L	5,6	2.2UH 10% 520mA	45630003	3
M	1	MAINS COIL 2x27mH	45390003	15
FUSES				
F	1	T3,15A HIGH BREAK 5X20MM	43751652	3
OTHERS				
A	1	COVER CAM CONNECTOR	81403599	3
A	2	MODULE SUPPORT	81408167	3
F	1	FUSEHOLDER CLIPS 5*20MM	41540001	1
Q	1	ROW CONNECTOR 2-PIN	73184701	3
Q	10	CONNECTOR PHONO 3,5mm	41910001	8
Q	2	WIRE BUNDLE 2-PIN 410mm	96008011	5
Q	4	WIRE BUNDLE 8-PIN 600mm	96010033	12
Q	5	WIRE BUNDLE 12-PIN 500mm	96010026	13
Q	6	RCA CONNECTOR 3 IN ROW	41430747	9
Q	9	S-VHS CONNECTOR	41452244	10

FO600 Dynamic focus module

RESISTORS				
RFO	1	FUS V 100R 10% 1W0	31840002	3
		POT 100M 15% 1.5W FOCUS	31260001	28
CAPACITORS				
CFO	1	IMPCAP 820P K 1K5V	CE2094	4
OTHERS				
		FOCUS HOLDER	80409580	9
		ROW CONNECTOR 2-P	73184701	3
		ROW CONNECTOR 5-P	41710001	3
		TRAFO AT4043/67A	45380018	18
		WIRE BUNDLE FO/Z	96010058	9

Item		Description	Order no.	PG

HH601/602/604 CRT-module

RESISTORS				
JH	12	SMD 0R J 0W25	31425601	1
RH	1,37	SMD 2K2 5% 0W1	31425828	1
RH	2	SMD 750R J 0W25	31425004	1
RH	3,12,16	CARF 820R 5% 0W25 FP	31630044	1
RH	4,13,17	METF 68K 2% 1W0	31440008	2
RH	6,7,8,9,11,14	SMD 1K5 5% 0W1	31425826	1
RH	15	SMD 470K 5% 0W1	31425848	1
RH	18,19,21,22,23,24	CARF 470R 5% 0W25	31660014	1
RH	26	CARF 33K 5% 0W25 FP	31630036	1
RH	27	CARF 4M7 5% 0W25	31660029	1
RH	28,33	COMP 1K5 10% 0W5	31594639	3
RH	29	CARF 18K 5% 0W25	31660040	1
RH	31	SMD 22R 5% 0W1	31425849	1
RH	36	SMD 100K 5% 0W1	31425844	1
RH	38	SMD 470R 5% 0W1	31425817	1
RH	39	SMD 1K0 5% 0W1	31425820	1
RH	40	SMD 100R 5% 0W1	31425852	1
CAPACITORS				
CH	1	ELYT 47U 20% 16V	34540019	2
CH	2,3,7,8,12,13	CESMD 22N 20% 50V	32790009	1
CH	4,9,14,19	MKT 22N 10% 250V	33380002	2
CH	5	CESMD 68P 5% 50V	32125516	1
CH	5,10,15 (HH602/4)	CESMD 68P 5% 50V	32125516	1
CH	6,11,16	CESMD 1N0 10% 50V	32536203	1
CH	17	ELYT 4U7 20% 250V	34610001	4
CH	18	ELYT 10U 20% 250V	34610002	5
CH	20 (HH602/4)	CER 68p 5% 50V	23030174	6
CH	21	MKT 220N 10% 63V	33127108	3
CH	22	MKT 8N2 10% 1K5V	33360007	4
CH	23,24,25 (HH602/4)	CESMD 150P 5% 50V	32125511	1
CH	27	ELYT 10U 20% 63V	34540025	2
CH	28	ELYT 100U 20% 25V	34540020	2
TRANSISTORS				
TH	1	NPN BF422 250V 100mA	36125217	2
TH	2	PNP SMD BC857B 45V	36145412	2
DIODES				
DH	1,2	RECT PWR BYV36C 600V	36575452	4
DH	3,4	SMD LS4148 75V 200mA	36490002	1
INTEGRATED CIRCUITS				
ICH	1,2,3	VIDEO TDA6111Q-N4C	37440004	14
COILS				
LH	1	10UH 10% 230mA	45620003	3
LH	2,3,4 (HH602/4)	2.2UH 10% 1000mA	45571751	3
LH	6	10UH 10% 230mA	45630002	3
OTHERS				
CRT SOCKET		METALLO	41510001	16
CRT SOCKET (HH602)		METALLO	41554034	9
CRT1		BLADE CONNECTOR 2.8MM	41930001	1
CRT2		BLADE CONNECTOR 2.8MM	41930001	1
UG2		BLADE CONNECTOR 2.8MM	41930001	1
GG/RF		WIRE BUNDLE 10-P 400mm	96010002	11
		HEATSINK 7 100Hz	81403891	6
		PT-SCREW 3,5x6,5	62038859	1
		WIRE BUNDLE 6-P 370mm	96010019	10

Item		Description	Order no.	PG
LL600 IF-module				
RESISTORS				
RL	1,11	SMD 220R 5% 0W1	31425815	1
RL	2	SMD 47K 5% 0W1	31425836	1
RL	3	SMD 2K2 5% 0W1	31425828	1
RL	4,8,28,30	SMD 1K0 5% 0W1	31425820	1
RL	7	SMD 100R 5% 0W1	31425852	1
RL	9	SMD 5K6 5% 0W1	31425825	1
RL	12	SMD 100K 5% 0W1	31425844	1
RL	14,25	SMD 68R 5% 0W1	31425876	2
RL	15	SMD 3M3 5% 0W1	31425884	1
RL	16	SMD 22K 5% 0W1	31425837	1
RL	17	CARF 6K8 5% 0W25 FP	31630029	1
RL	19	CARF 470R 5% 0W25	31660014	1
RL	26	SMD 270R 5% 0W1	31425855	1
CAPACITORS				
CL	1,2,6,15,16	ELYT 1U0 20% 63V	34540022	2
CL	3,8,17,18	CESMD 1N0 10% 50V	32536203	1
CL	4,14	CESMD 10N 10% 50V	32535918	1
CL	5,7	ELYT 10U 20% 63V	34540025	2
CL	9	CESMD 22N 20% 50V	32790009	1
CL	10	CESMD 47P 5% 50V	32125508	1
CL	12,20	CESMD 100N 20% 50V	32790011	1
CL	13	CESMD 3P3 5% 50V	32190011	1
CL	19	ELYT 2U2 20% 63V	34540023	2
CL	21	ELYT 22U 20% 35V	34540021	2
TRANSISTORS				
TL	3	NPN SMD BF599 25V 25mA	36280003	4
TL	2,6,9	NPN SMD BC847B 45V 100mA	36145312	2
TL	7,8	PNP SMD BC857B 45V 100mA	36145412	2
INTEGRATED CIRCUITS				
ICL	1,2	VIDEO TDA6050-5/D5	37440005	14
COILS				
LL	1	ADJ 135nH	45530017	5
LL	2	1.5UH 10% 570mA	45630001	3
LL	3	1.2UH 10% 610mA	45630006	3
LL	4	10UH 10% 230mA	45620003	3
LL	5	22UH 10% 170mA	45620005	3
LL	6	ADJ 0,26UH	45530003	5
FILTERS				
ZDL	6	FIL CER TPS 5.5 MB	45558410	4
ZL	2	SAW FILTER G9251 M	45740004	14
ZL	4	SAW FILTER G3962 M	45740003	16
OTHERS				
		F-CONNECTOR 7-PIN	41750001	5
		INTEFERENCE SHIELD	81403884	5

Item		Description	Order no.	PG
LL675 IF-module				
RESISTORS				
J	9,10,15,6	SMD 0R 5% 0W1	31425802	1
RL	1	SMD 330R 5% 0W1	31425857	1
RL	2	CARF 4K7 5% 0W25	31660031	1
RL	3,53,59,58	SMD 47K 5% 0W1	31425836	1
RL	4	SMD 2K2 5% 0W1	31425828	1
RL	11,37	SMD 100K 5% 0W1	31425844	1
RL	13,36	SMD 220R 5% 0W1	31425815	1
RL	14	SMD 680R 5% 0W1	31425860	1
RL	17	SMD 4K7 5% 0W1	31425824	1
RL	18	CARF 47K 5% 0W25	31660026	1
RL	19,46,55,56,57,61	SMD 10K 5% 0W1	31425833	1
RL	21,22,26,49,64	SMD 1K0 5% 0W1	31425820	1
RL	23	SMD 5K6 5% 0W1	31425825	1
RL	24	SMD 100R 5% 0W1	31425852	1
RL	27,39,45	SMD 6K8 5% 0W1	31425831	1
RL	32	CARF 470R 5% 0W25	31660014	1
RL	33	SMD 33R 5% 0W1	31425808	1
RL	34	SMD 68R 5% 0W1	31425876	2
RL	38,43,44,52	SMD 22K 5% 0W1	31425837	1
RL	42	SMD 3M3 5% 0W1	31425884	1
RL	48	SMD 120R 5% 0W1	31425853	1
RL	51	SMD 68K 5% 0W1	31425838	1
RL	54	SMD 3K3 5% 0W1	31425829	1
RL	65	SMD 1K5 5% 0W1	31425826	1
CAPACITORS				
CL	1	CESMD 47P 5% 50V	32125508	1
CL	2,13,14,15, 16,21,33	ELYT 1U0 20% 63V	34540022	2
CL	3,6,9,11,12,18, 19,27,32,38	CESMD 1N0 10% 50V	32536203	1
CL	4,22,26,31,43	CESMD 10N 10% 50V	32535918	1
CL	7,8,42	ELYT 4U7 20% 63V	34540024	2
CL	17,28	ELYT 10U 20% 63V	34540025	2
CL	23	CESMD 3P3 5% 50V	32190011	1
CL	34,37	CESMD 22P 5% 50V	32125521	1
CL	35	ELYT 2U2 20% 63V	34540023	2
CL	36	CESMD 12P 5% 50V	32124707	1
CL	39	MKT 220N 10% 63V	33127108	3
CL	41	CESMD 100N 20% 50V	32790011	1
CL	44	ELYT 100U 20% 16V	34540131	2
CL	46	CESMD 68P 5% 50V	32125516	1
TRANSISTORS				
TL	1,2,3,5,6,9,11, 13,14,15,16,17	NPN SMD BC847B 45V	36145112	2
TL	4	NPN SMD BF599 25V	36280103	4
TL	7,8,12	PNP SMD BC857B 45V	36145412	2
DIODES				
DL	2,8	SMD LS4148 75V 200mA	36490102	1
DL	6,10	1N4148 75V 200mA	36420102	1
DL	7,9,11	SMD BA592 35V 100mA	36490104	3
INTEGRATED CIRCUITS				
ICL	1	VIDEO TDA6050-5/D5	37440005	14
ICL	2	VIDEO TDA6050-5/D5 Sele	37440032	14
ICL	3	AUDIO SMD TDA9830 SO16	37430009	14
COILS				
LL	1	ADJ 135nH	45530017	5
LL	2	22UH 10% 170mA	45620005	3
LL	3	0.82uH 10% 500mA	31301120	4
LL	4	470nH 20% 750mA	45630017	3
LL	6	ADJ 0,23UH	45530006	5
LL	7	6,8uH	31300001	6
LL	9	3.9uH 10% 400mA	45630019	3

Item		Description	Order no.	PG
FILTERS				
ZL	1	SAW K9260 M	45740008	15
ZL	2	SAW L9453	45740010	18
ZL	3	SAW K3953	45740017	18
ZL	4	SAW OFW G3264	31201878	14
ZL	6	CER TPS 6.0 MB	45558411	4
ZL	7	CER TPS 6.5 MB	45558412	5
ZL	8	CER TPS 5.5 MB	45558410	4
OTHERS				
X	1,2	F-CONNECTOR 7-PIN	41750001	5
		INTEFERENCE SHIELD	81403884	5

SW600 Switch module

RESISTORS				
RSW	1,5	CARF 220K 5% 0W25 FP	31630045	1
RSW	2	CARF 4K7 5% 0W25 FP	31514522	1
RSW	3	CARF 470R 5% 0W25 FP	31514520	1
RSW	4	CARF 1K0 5% 0W25 FP	31514519	1
RSW	6	CARF 2K2 5% 0W25 FP	31630050	1
RSW	7	CARF 4K7 5% 0W25	31660031	1
CAPACITORS				
CSW	1	ELYT 100U 20% 25V	34540020	2
CSW	2	MKT 22N 10% 250V	33380002	2
TRANSISTORS				
TSW	1	N-FET PWR BUK457-400B	36370003	16
TSW	2	PNP BC557B 45V 100mA	36146424	1
TSW	3	NPN BF422 250V 100mA	36125217	2
DIODES				
DSW	2,3	RECT PWR 1N4937 600V	36575353	2
ZENERS				
DZSW	1	Z BZX83C 12V 5%	36770012	1
COILS				
LSW	1	280uH FJ1311	45610004	6
OTHERS				
O	8	FASTENING SPRING	UC0859	2
		MODULE SUPPORT	54040573	4
		F-CONNECTOR 7-P	41750001	5

Item		Description	Order no.	PG

TA601 AUX-module

RESISTORS				
J	4	SMD 470R 5% 0W1	31425817	1
RTA	1	FUS P SMD 2R2 J 0W125	31810001	3
RTA	2,13,14,21	SMD 470R 5% 0W1	31425817	1
RTA	3,4,5,15,16,22	SMD 33K 5% 0W1	31425840	1
RTA	6,7,24,31	SMD 100K 5% 0W1	31425844	1
RTA	8,11	SMD 180K 5% 0W1	31490012	1
RTA	9,10	SMD 100R 5% 0W1	31425852	1
RTA	12,25,33,34	SMD 10K 5% 0W1	31425833	1
RTA	17,18	SMD 1M0 5% 0W1	31425801	1
RTA	19,20	SMD 220K 5% 0W1	31425847	1
RTA	23	SMD 27K 5% 0W1	31425839	1
RTA	26	SMD 10K0 1% 0W1	31490057	1
RTA	27	SMD 12K1 1% 0W1	31490051	1
RTA	28	SMD 390R 5% 0W1	31425816	1
RTA	29	SMD 464R 1% 0W1	31490044	1
RTA	30	SMD 120K 5% 0W1	31425845	1
RTA	32	SMD 680K 5% 0W1	31490059	1
CAPACITORS				
CTA	1,6,11,13,16,19	CERSMD 100N K 25V	32790018	1
CTA	2	ELYT 10U 20% 16V	34540032	5
CTA	3,4,15,17,18	ELYT 22U 20% 16V	34540009	2
CTA	5	ELYT 47U M 16V	34540045	2
CTA	7,8	ELYT 1U0 20% 50V	34540030	1
CTA	9,10	CERSMD 10N 20% 50V	32536212	1
CTA	12	ELYT 100U 20% 16V	34540031	2
CTA	14	CERSMD 470P 5% 50V	32190013	1
TRANSISTORS				
TTA	1,2,8,9	N-FET SMD 2N7002 60V	36380002	4
TTA	3,4,6,7	NPN SMD BC847B 45V 100mA	36145312	2
TTA	5	PNP SMD BC857B 45V 100mA	36145412	2
DIODES				
TDA	1,2,3	SMD LS4148 75V 200mA	36490002	1
INTEGRATED CIRCUITS				
ICTA	1	OPAM SMD TL082CD	37470003	5
ICTA	2	SMD-IC LM358 SO-8	43007077	7
COILS				
LTA	1,2,3,4	10UH 10% 230mA	45620003	3
OTHERS				
XA	1	CONNECTOR HEADER 6-PIN	41710002	3
XT	7	CONNECTOR RCA RED	41920001	5
XT	8	CONNECTOR RCA WHITE	41920002	4

Item	Description	Order no.	PG

VM600 SVM-Module

RESISTORS

RVM 1	SMD 3K9 5% 0W1	31425830	1
RVM 2,7	SMD 680R 5% 0W1	31425860	1
RVM 3	SMD 10K 5% 0W1	31425833	1
RVM 4,13	SMD 1K0 5% 0W1	31425820	1
RVM 6,23,31	CARF 100R 5% 0W25 FP	31514516	1
RVM 8	SMD 100R 5% 0W1	31425852	1
RVM 9,14	SMD 820R 5% 0W1	31425819	1
RVM 11,12	SMD 470R 5% 0W1	31425817	1
RVM 16,17	SMD 47R 5% 0W1	31425809	1
RVM 18,21	SMD 6K8 5% 0W1	31425831	1
RVM 19	SMD 560R 5% 0W1	31425818	1
RVM 22	CARF 330R 5% 0W25 FP	31514524	1
RVM 24	CARF 3R3 5% 0W25 FP	31514515	1
RVM 26,28	CARF 10R 5% 0W25 FP	31514513	1
RVM 27,29	SMD 5K6 5% 0W1	31425825	1
RVM 32	CARF 3R3 5% 0W25 FP	31514515	1
RVM 33	METF 100R 1% 0W6	31440035	1

CAPACITORS

CVM 1	CESMD 22P 5% 50V	32125521	1
CVM 2	CESMD 68P 5% 50V	32125516	1
CVM 3,6,12,13, 14,16,17	CESMD 100N 10% 50V	32535920	1
CVM 4	CESMD 10N 10% 50V	32535918	1
CVM 7,8	CESMD 22N 10% 50V	32535914	1
CVM 9	ELYT 10U 20% 63V	34540025	2
CVM 11	ELYT 47U 20% 50V	34540028	2
CVM 18	CESMD 2N2 10% 50V	32535904	1

TRANSISTORS

TVM 1,6	NPN SMD BF599 25V 25mA	36280003	4
TVM 2,3,4,7	PNP SMD BF824 30V 25mA	36120751	4
TVM 8	PNP BC638 60V 1A	36220004	3
ICVM 9	NPN BC637 60V 1A	36220003	3

OTHERS

	F-CONNECTOR 4-PIN	41750003	5
	WIRE BUNDLE 3-PIN 150mm	96010060	12

Item	Description	Order no.	PG

RCF604 RC FINLUX BLACK

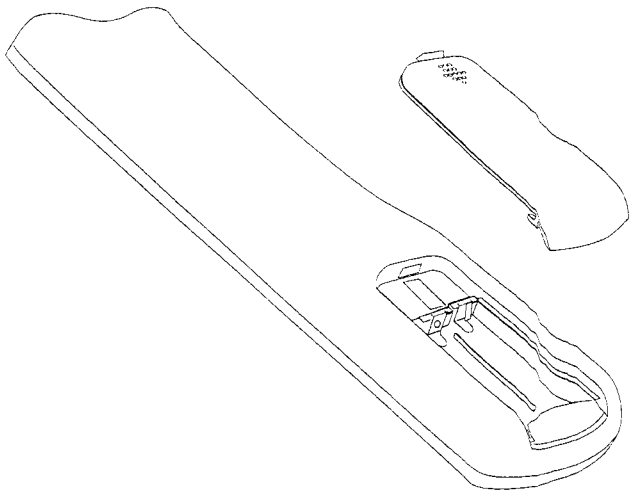
KEYPAD RCF600 GPN101638/PP		52012321	13
BOTTOM MAT.DIGI BLACK		80418110	10
BATTERY COVER MAT.D.B		80418127	3
COVER FINLUX RCF604		80418583	12
BATTERY SPRING		81403070	6
REMOTE CONTROL MODULE	TC611		27

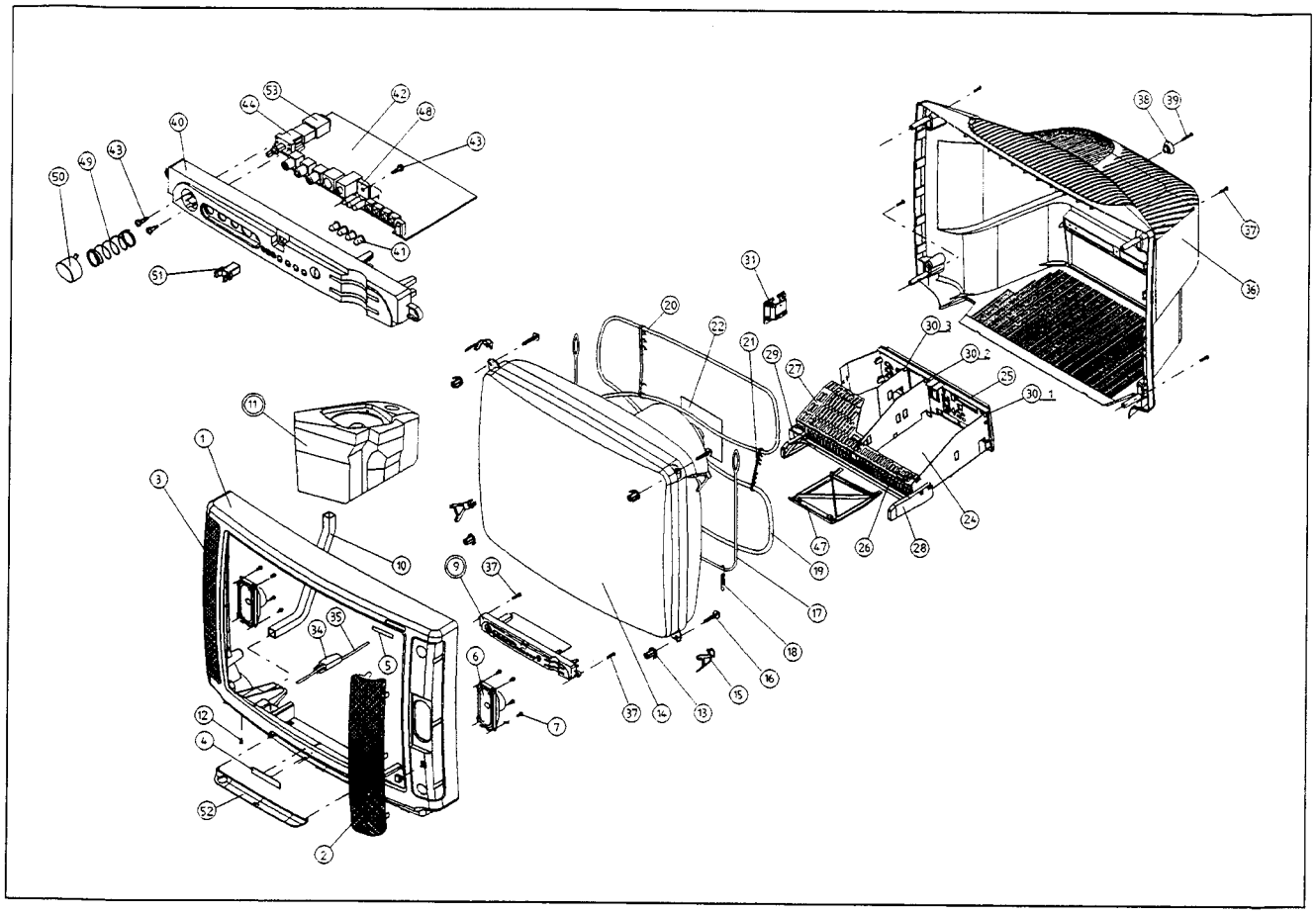
RCN610 RC NOKIA

BATTERY COVER MAT.D.B		80418127	3
BATTERY SPRING		81403070	6
BOTTOM MAT.DIGI BLACK		80418110	10
COVER N MAT.DIGI BLACK		80418151	9
KEYPAD RCN600		52012307	13
REMOTE CONTROL MODULE	TC612		23
SLIDE COVER NOKIA RCN610 8		80419549	6

RCN611 RC SALORA

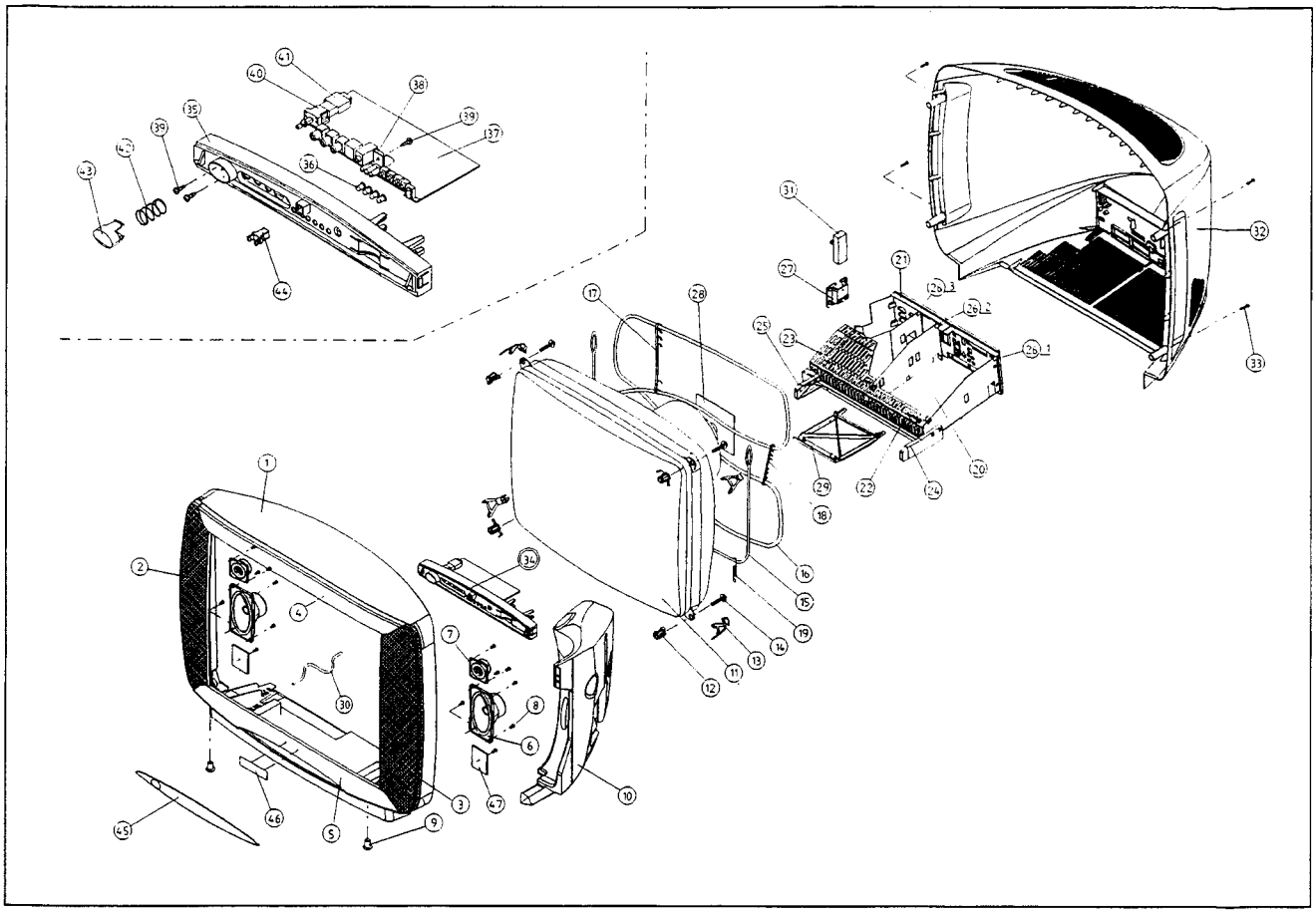
KEYPAD RCN600		52012307	13
BOTTOM MAT.DIGI BLACK		80418110	10
BATTERY COVER MAT.D.B		80418127	3
COVER N MAT.DIGI BLACK		80418151	9
SLIDE COVER SALORA RCN611 8		80419553	8
BATTERY SPRING		81403070	6
REMOTE CONTROL MODULE	TC612		23





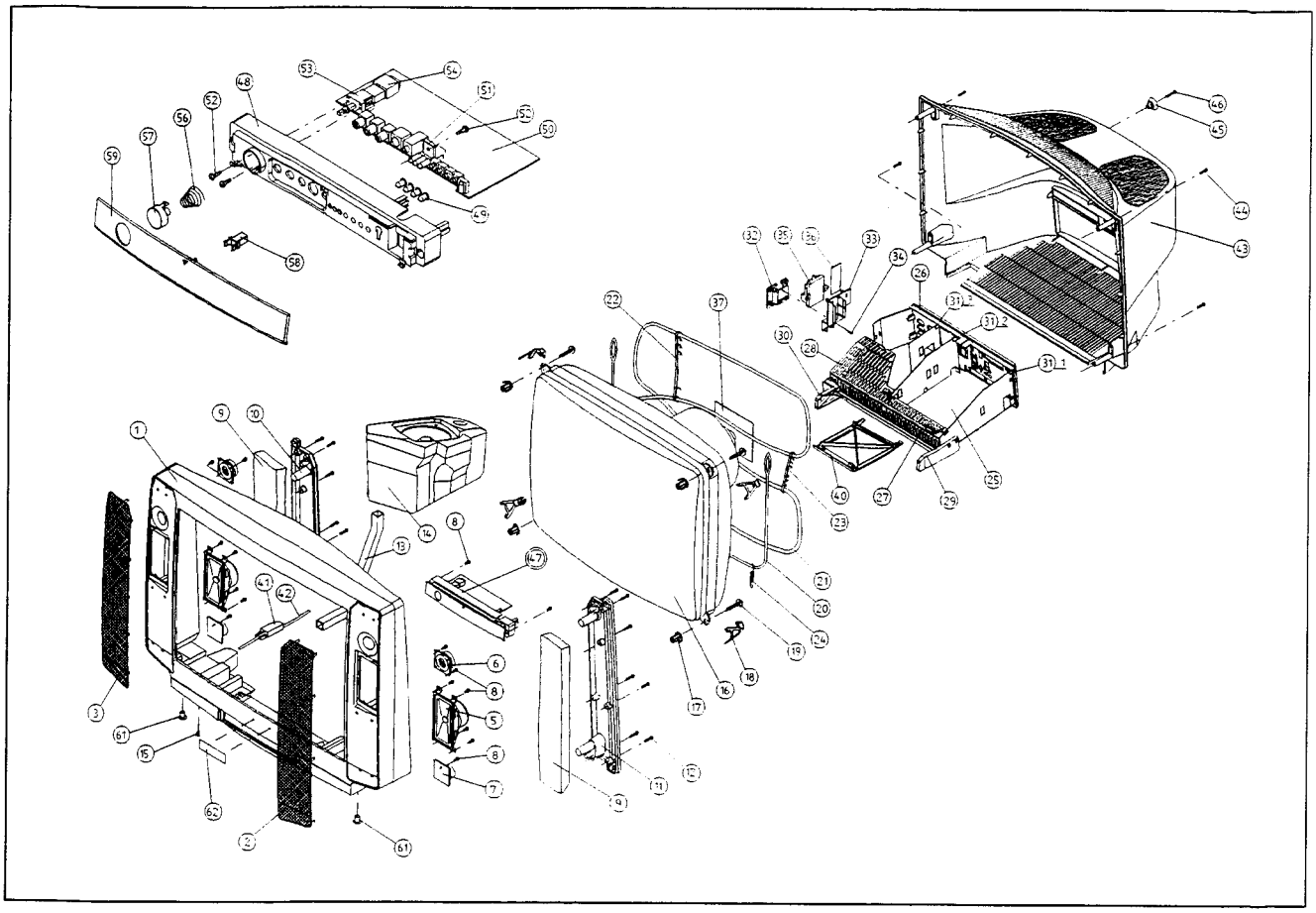
Item	Description	Order no.	PG
01	Cabinet 28E1 mat.digi black 28"	E82070590	43
01	Cabinet 25E1 mat.digi black 25"	E82070340	42
02	Grill right mat digi black	E81408137	22
03	Grill left mat digi black	E81408144	22
04	Badge NOKIA 51mm	UA1243	08
05	Badge NOKIA TECHNOLOGY	UA8005	10
06	Loudspeaker LPB511/14/90SC	QP0122	23
07	Pt-screw KB 40X10	WC0353	03
09	Control unit E1	ESY620	37
12	Screw AB3,5X9,5	WC0308	01
13	Picture tube adj.piece	E80440430	04
14	Picture tube A66EDN43X10 MP 28"	E46003020	58
14	Picture tube A59EDN43X10 MP 25"	E46003037	56
15	Degaussing coil holder	UG0585	03
16	Picture tube Pt-screw 7x30	E62034039	05
17	Ground braid 28"	E96010090	11
17	Ground braid 25"	E96011041	11
18	Grounding spring	E81401082	07
19	Degaussing coil 28"	E93030032	21
19	Degaussing coil 25"	E93020035	21
20	Demacoil holder long	E80403115	05
21	Degaussing coil holder	E80424133	05
22	Crt module 100Hz	EHH600	31
24	Main board 100Hz 4:3	EAXEBVM	60
25	Rear plate 3 (AR602/TA601)	E80409531	12
26	Touch protection 100/50HZ	E80409511	09
27	Add. touch protection 100Hz	E80409597	04
28	Chassis holder left 100/50Hz	E80409535	06
29	Chassis holder right 100Hz	E80409542	09
30	Connecting piece 100/50Hz	E80409568	03
31	Connecting plate 1/2+4 heatsinks	E80409504	04
34	Strain relief	E80409573	02
35	Mains cable	E70003769	12
36	Back cover 28E1 mat.digi black	E82403050	29
37	Pt-screw KB 40X20	WC0354	01
38	Cover plug for back cover	E80409631	05

Item	Description	Order no.	PG
40	Control unit frame	E80310167	11
41	Button	E80425203	01
42	Control module	EFC600	36
43	Pt-screw KB30X8	WC0371	01
44	Mains switch 250V 4/80A	G41210005	12
47	Protection for main board	E80409600	05
48	Module support	E81408167	03
49	Spring	UC3051	03
50	Mains button E1	80440329	03
51	Lock F/V-2	E80413473	06
52	Flap E1 100 Hz 8	E80421158	12
53	Touch guard	UG0636	04
	Feature box module	EDB600	59
	If-module B/G 30236	ELL600	34
	If-module B/G DK,I,L,L' 30376	ELL675	39
	Remote control NOKIA	ERCN610	28
	140V switch	ESW600	25
	Remote control module	ETC612	23
	Wire bundle PK/K	E96008117	05
	Loudspeaker wire bundle	E96010087	11
	Wire bundle PK/Z 700/400mm	E96010156	08
	Module grounding wire L=300	E96020051	07
	Antenna cable 2.0m with ferrite	G47780002	20



Item	Description	Order no.	PG
01	Cabinet 29F2 M.DBL	E82009600	34
02	Grill left	E80101050	26
03	Grill right	E80101060	26
04	Trim panel upper Metal Black 16691	E80201101	26
	Trim panel upper Metal Blue 33065	E80201102	26
	Trim panel upper Metal Red 34398	E80201104	22
	Trim panel upper Metal Green 34410	E80201105	22
	Trim panel upper Dark-Cherry 33162	E80201103	39
05	Trim panel lower Metal Black 16691	E80201111	26
	Trim panel lower Metal Blue 33065	E80201112	26
	Trim panel lower Metal Red 34398	E80201114	23
	Trim panel lower Metal Green 34410	E80201115	23
	Trim panel lower Dark-Cherry 33162	E80201113	39
	Snap lock for wooden trims R	E80409736	04
	Snap lock for wooden trims L	E80409729	04
06	Speaker LPB713/19/65	G43120005	21
07	Tweter LPKH50/10/100SK	E33004365	19
08	Pt-screw KB 40X10	WC0353	01
09	Foot pad	E80424027	06
10	Woofer box F7,F2	SCE063	38
11	Picture tube Vid A68EES038X322	G43642814	99
12	Picture tube holder	G84480810	04
13	Demakelan holder 29 A-malli	E80409617	03
14	Pt-screw K70X30	WC0426	07
15	Grounding braid 29 100hz	E96010103	13
16	Degaussing coil 28 Orega	E93030032	21
17	Degaussing coil holder, long	E80403115	05
18	Degaussing coil holder	E80424133	05
19	Grounding spring	E81401082	07
20	Main board 100HZ 4:3	EAXRATB	60
21	Rear plate 4 (——/TA601)	E80409532	13
22	Touch protection 100/50HZ	E80409511	09
23	Add. touch protection 100Hz	E80409597	04
24	Chassis holder left 100/50Hz	E80409535	06
25	Chassis holder right 100Hz	E80409542	09
26	Connecting piece 100/50Hz	E80409568	03
27	Connecting plate 1/2+4 heatsinks	E80409504	04

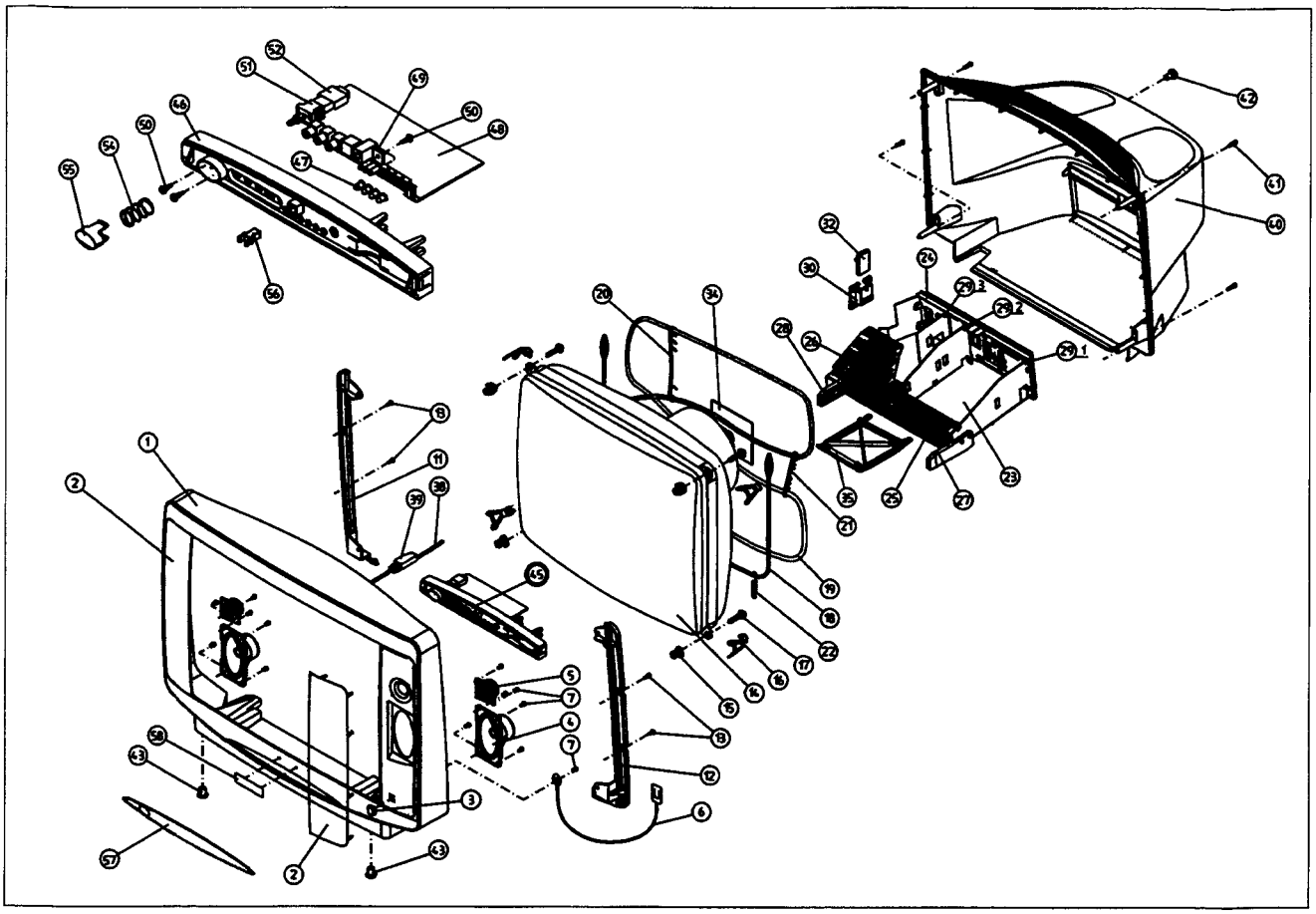
Item	Description	Order no.	PG
28	Crt module 100Hz/SVM/DF	EHH604	36
29	Protection for main board	E80409600	05
30	Power cord+connector 2,25m	E70003769	12
31	Dynamic focus	EFO600	36
32	Back cover F2 29 Mat.Digi Black	E82403260	32
33	Pt-screw KB 40X20	WC0354	01
34	Control unit	ESY650	37
35	Control unit frame F1	E80311011	13
36	Button	E80425203	01
37	Control module	EFC600	36
38	Module support	E81408167	03
39	Pt-screw KB30X8	WC0371	01
40	Mains switch 250V 4/80A	G41210005	12
41	Touch guard	UG0636	04
42	Spring	UC3051	03
43	Mains button F1	E80425241	05
44	Lock F/V-2	E80413473	06
45	Flap 100¤Hz 8	E80402500	15
46	Badge nokia 51mm	UA1243	08
47	Crossover network F2	EAJ603	21
	TA601 Fastening piece	G84481630	04
	Lead lock	UG0086	02
	Active subwoofer	EAV601	28
	Comb filter module	ECF602	35
	Feature box module	EDB600	59
	If-module B/G,DK,I,L,L'	ELL675	39
	Remote control Nokia	ERCN610	28
	140V switch	ESW600	25
	Aux-module	ETA601	25
	Remote control module	ETC612	23
	SVM-module	EVM600	24
	Wire bundle PK/K	E96008117	05
	Loudspeaker wire bundle	E96010087	11
	Wire bundle PK/Z 860/400MM	E96010155	08
	Ant cable 2.0m with ferrite	G47780002	20



Item	Description	Order no.	PG
01	Cabinet 29 U Mat.Digi Black	E8203246A	51
02	Grill right Mat.Digi Black	E81206229	21
03	Grill left Mat.Digi Black	E81206212	21
05	Loudspeaker 8ohm 65x134mm	G43120009	19
06	Tweter LPKH50/10/100SK	E33004365	19
07	Crossover network 29U1	EAJ602	20
08	Pt-screw KB 35x8	E62039311	03
10	Loudspeaker cover, right	E80302643	20
11	Loudspeaker cover, left	E80302636	20
12	Pt-screw KB 35x12	E62039239	06
13	Subwoofer box holder	E81408105	10
14	Sub.woofer box	SCE070	35
15	Screw AB3,5X9,5	WC0308	01
16	Picture tube Vid A68EES038X322	G43642814	99
17	Picture tube adj.piece	E80440430	04
18	Degaussing coil holder 29 "A"	E80409617	03
19	Pt-screw K70X30	WC0426	07
20	Grounding braid 29 100hz	E96010103	13
21	Degaussing coil 28 Orega	E93030032	21
22	Lead band 2,5x203mm	E54041046	01
23	Degaussing coil holder	E80424133	05
24	Grounding spring	E81401082	07
25	Main board 100Hz 4:3	EAXEDTB	60
26	Rear plate 4 (——/TA601)	E80409532	13
27	Touch protection 100/50HZ	E80409511	09
28	Add. touch protection 100Hz	E80409597	04
29	Chassis holder left 100/50Hz	E80409535	06
30	Chassis holder right 100Hz	E80409542	09
31	Connecting piece 100/50Hz	E80409568	03
32	Connecting plate 1/2+4 heatsinks	E80409504	04
33	Focus holder	E80409580	09
35	Dynamic focus module	EFO600	36
37	Crt module 100Hz Dyn.Fokus	EHH601	34
40	Protection for main board	E80409600	05
41	Strain relief	E80409573	02
42	Mains cable 2,25m	E70003769	12
43	Back cover black	E82402511	28

Item	Description	Order no.	PG
44	Pt-screw KB 40X20	WC0354	01
45	Rubber pad	UL0104	03
46	Pt-screw KB 40X40	WC0429	02
47	Control unit U1 71	ESY600	38
48	Control unit frame U	E80310265	13
49	Button	E80425203	01
50	Control module	EFC600	36
51	Module support	E81408167	03
52	Pt-screw KB30X8	WC0371	01
53	Mains switch 250V 4/80A	G41210005	12
54	Touch guard	UG0636	04
56	Spring	UC3051	03
57	Mains button	E80409428	04
58	Lock F/V-2	E80413473	06
59	Flap 100Hz 8	E80432181	14
61	Foot pad	E80424027	06
62	Badge Finlux 53mm	UA8027	10
62	Badge Sky Design	E78200289	11
63	Lead band	E54041380	01
64	Lead lock	UG0086	02
	TA601 Fastening piece	G84481630	04
	Active subwoofer	EAV601	28
	Comb filter module	ECF602	35
	Feature box module	EDB600	59
	Dynamic focus	EFO600	36
	If-module B/G	ELL600	34
	Remote control Finlux black	ERCF604	29
	Aux-module	ETA601	25
	Remote control module	ETC611	27
	140V Switch	ESW600	25
	Ant cable ass 2.0m with ferrite	G47780002	20
	Wire bundle PK/K	E96008117	05
	Loudspeaker wire bundle	E96010087	11
	Wire bundle PK/Z 860/400MM	E96010155	08

29V100



Item	Description	Order no.	PG
01	Cabinet 29F1 Mat.Digi Black	E8200951A	48
02	Grill left/right	E81204182	18
03	Grounding piece	E80409295	03
04	Speaker LPB713/19/65	G43120005	21
06	Grounding wire	E96020051	07
05	Tweter LPKH50/10/100SK	E33004365	19
07	Pt-screw KB 40X10	WC0353	03
11	Loudspeaker box cover right	E80302698	12
12	Loudspeaker box cover left	E80302701	12
13	Pt-screw 3,5x16	E62039400	01
14	Picture tube Vid A68EEH048X322	G43642903	60
15	Picture tube adj.piece	E80440430	04
16	Degaussing coil holder 29 "A"	E80409617	03
17	Pt-screw K70X30	WC0426	07
18	Grounding braid 29 100Hz	E96010103	13
19	Degaussing coil 28 Orega	E93030032	21
20	Leadband 2,5x203mm	E54041046	01
21	Degaussing coil holder	E80424133	05
22	Grounding spring	E81401082	07
23	Main board 100Hz 4:3	EAXEAUB	60
24	Rear plate 4 (——/TA601)	E80409532	13
25	Touch protection 100/50HZ	E80409511	09
26	Add. touch protection 100Hz	E80409597	04
27	Chassis holder left 100/50Hz	E80409535	06
28	Chassis holder right 100Hz	80409542	09
29	Connecting Piece 100/50Hz	80409568	03
30	Connecting plate 1/2+4 heatsinks	80409504	04
32	Focus pot 144M	G31250002	14
34	Crt module 100Hz/SVM	EHH602	36
35	Protection for main board	E80409600	05
38	Mains cable 2,25m	E70003769	12
39	Strain relief	E80409573	02
40	Back cover black 29F1	E82402511	28
41	Pt-screw KB 40X20	WC0354	01
42	Rubber pad	E80409631	05
43	Foot pad	E80424027	06

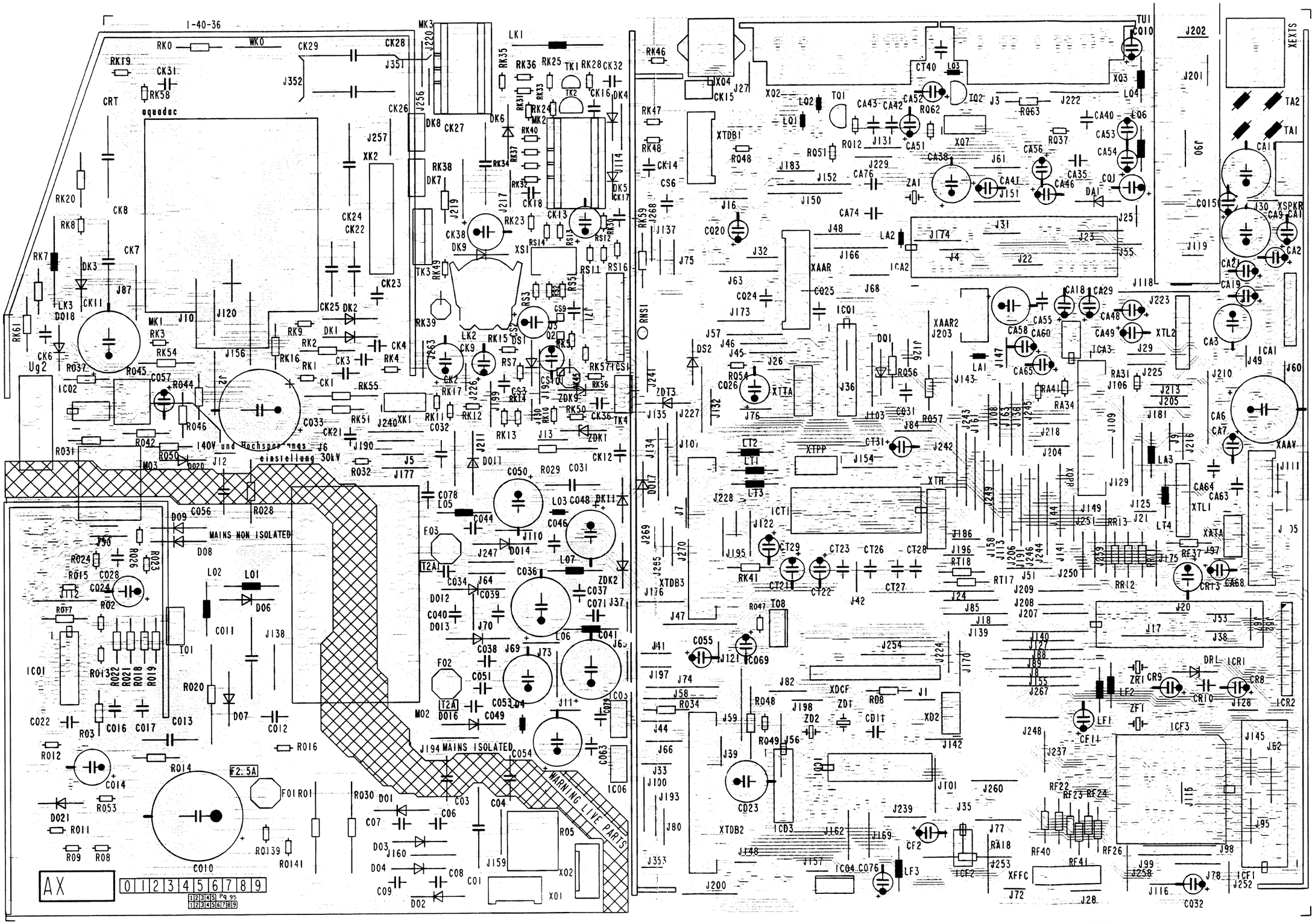
Item	Description	Order no.	PG
45	Control unit F1	ESY650	37
46	Control unit frame F1	E80311011	13
47	Button	E80425203	01
48	Control module	EFC600	36
49	Module support	E81408167	03
50	Pt-screw KB30X8	WC0371	01
51	Mains switch 250V 4/80A	G41210005	12
52	Touch guard	UG0636	04
54	Spring	UC3051	03
55	Mains button F1	E80425241	05
56	Lock F/V-2	E80413473	06
57	Flap Clearline 100Hz	E80402517	15
58	Badge-Salora (58MM)	UA1245	08
	Lead lock	UG0086	02
	TA601 fastening piece	E84481630	04
	Cover for camera connector	E81403599	03
	Combfilter module	ECF602	35
	Feature box module	EDB600	59
	Control module	EFC600	36
	If-module B/G	ELL600	34
	Remote control Salora black	ERCN611	28
	140V switch	ESW600	25
	AUX-module	ETA601	25
	Remote control module	ETC612	23
	Svm-module	EVM600	24
	Ant cable 2.0m with ferrite	G47780002	20
	Wire bundle PK/K	E96008117	05
	Tweeter cable	E96009128	06
	Tweeter cable with cap	E96009135	10
	Loudspeaker wire bundle	E96010145	12
	Wire bundle PK/Z 860/400mm	E96010155	08

FEATURE BOX
DB600

6611 72 15

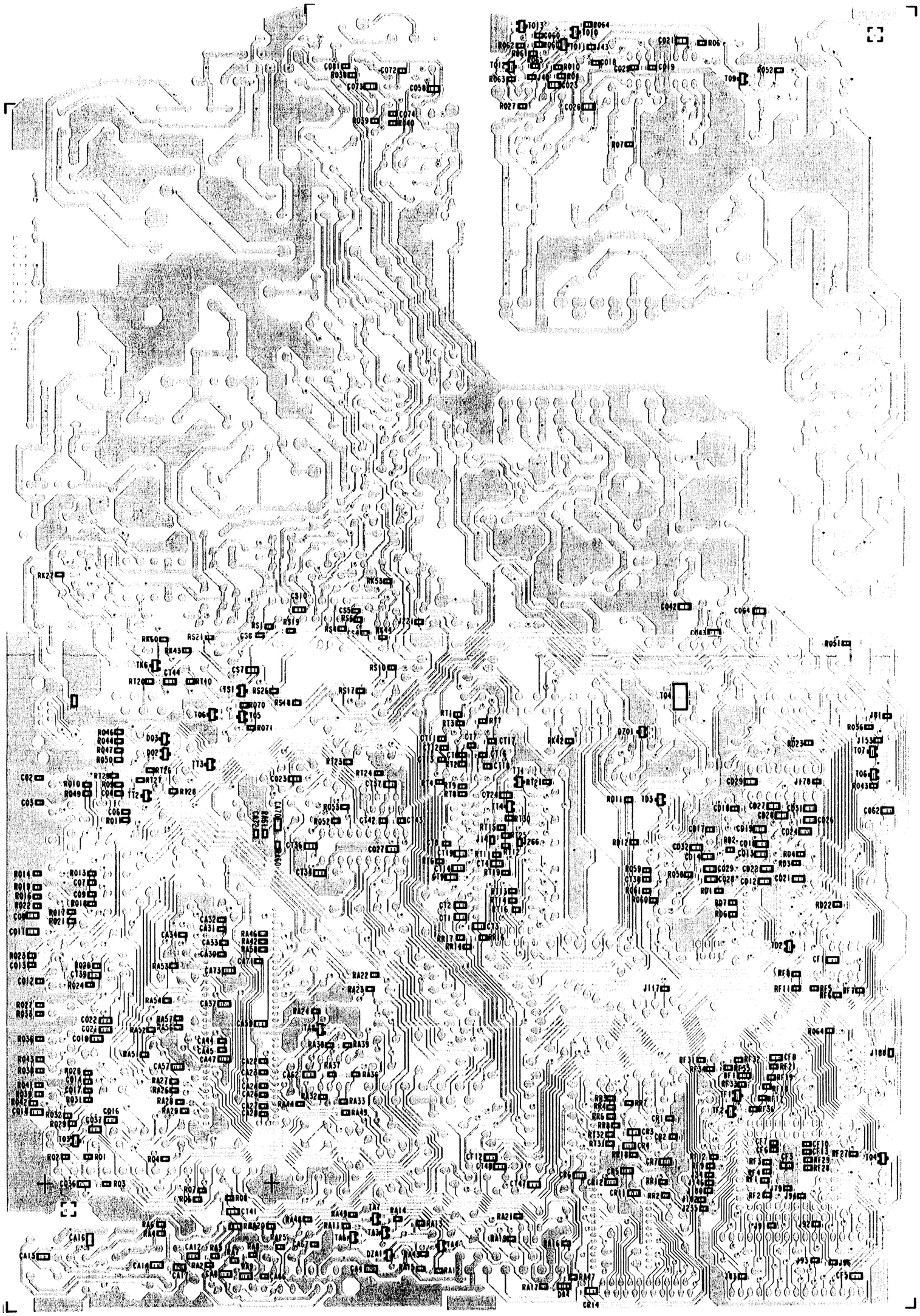
Acquisition PLL

Deflection PLL



FEATURE STEREO
FX-CHASSIS 100 Hz

6611 72 14



TP01 H
100mV/div 10µs/div
0V

TP02 H
500mV/div 10µs/div
3V

TP03 A2-STEREO
200mV/div 2µs/div
0V

TP03 FM+NICAM
200mV/div 2µs/div
0V

TP04 R 1kHz , TP05 L 3kHz
500mV/div 200µs/div
1V 1V

TP06
1V/div 25ns/div
1V

TP07 H
500mV/div 10µs/div
3.5V

TP08 H
200mV/div 10µs/div
2.2V

TP09 H
200mV/div 10µs/div
2V

TP10 H
200mV/div 10µs/div
2V

TP11 H
200mV/div 10µs/div
2.2V

TP12 H
200mV/div 10µs/div
2.2V

TP13 H
500mV/div 10µs/div
4V 4V

TP14
10mV/div 100ns/div
0V

TP15, 16 H PAL
200mV/div 20µs/div
2V 2V

TP15, 16 H SECAM
200mV/div 20µs/div
2V 2V

TP17, 18 H
500mV/div 20µs/div
2V 2V

TP19 H
500mV/div 20µs/div
3V

TP20, 21 H
500mV/div 20µs/div
2.5V 2.5V

TP22 H
1V/div 10µs/div
0V

TP22 V
1V/div 200µs/div
0V

TP23 H
1V/div 10µs/div
0V

TP24 V
1V/div 5ms/div
0V

TP25 H
1V/div 10µs/div
0V

TP26
1V/div 50ns/div
0V

TP27, 28 2H
0.2/1V/div 5µs/div
0V 0V

TP29
200mV/div 10µs/div
3.5V

TP30 2H
200mV/div 10µs/div
4V

TP31 2H
200mV/div 10µs/div
4V

TP32 2H
1V/div 10µs/div
0V

TP32 2V
1V/div 100µs/div
0V

TP35 2H
1V/div 10µs/div
0V

TP36 2V
1V/div 2ms/div
0V

TP37 2H
500mV/div 10µs/div
2V

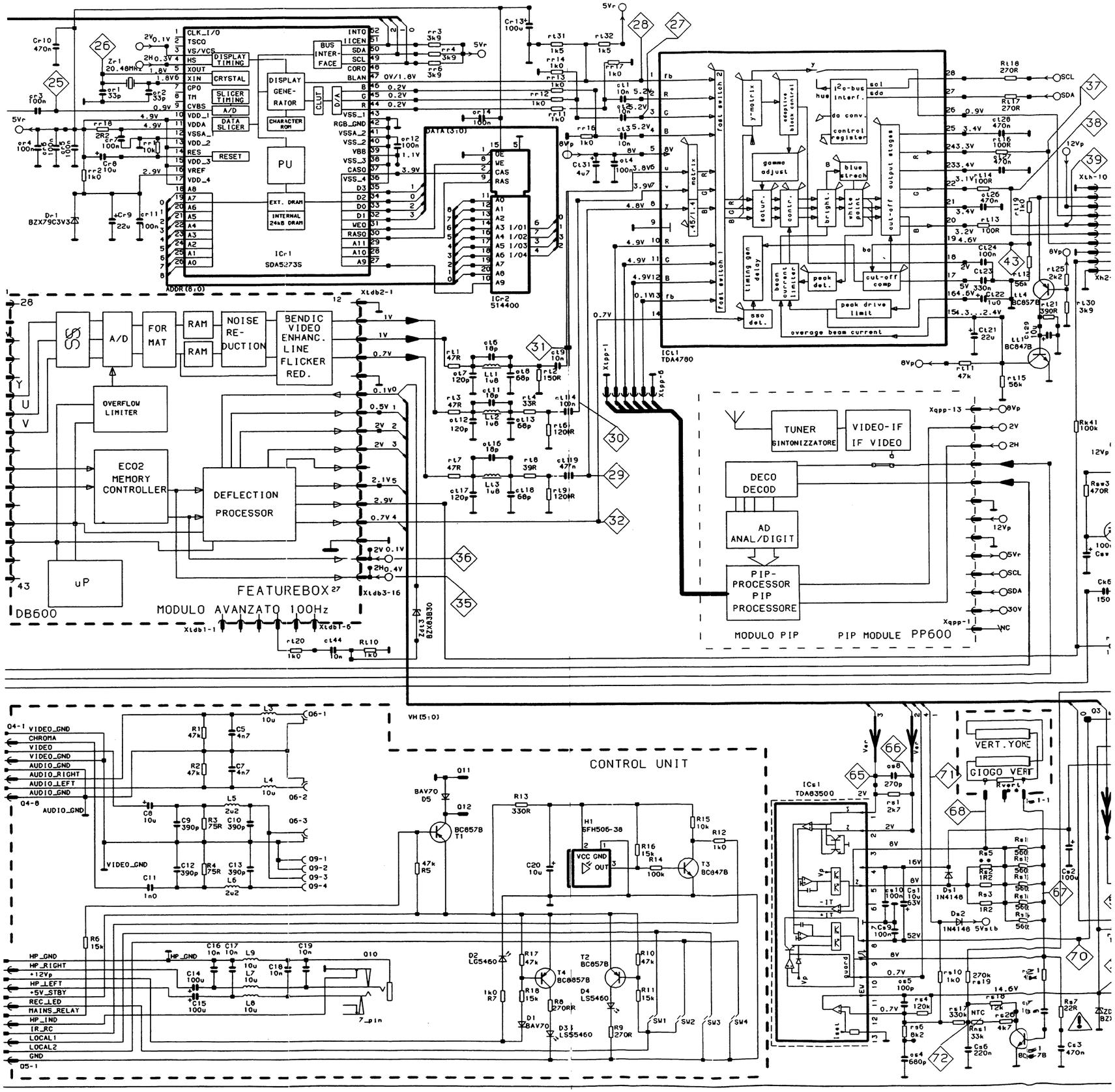
TP38 2H
500mV/div 10µs/div
2V

TP91 SB 1
100mV/div 10µs/div
0V

TP91 SB 2
100mV/div 1ms/div
0V

TP92 2H
10V/div 10µs/div
0V

TP92 SB 1
10V/div 10µs/div
0V



Tube / ** Comp	28" EDN	29" EEH	29" EES
Ck24	11n	13n	13n
Ck25	1n	-	-
Ck26	33n	15n	15n
Ck27	560n	390n	390n
Ck36	330n	-	-
Ck38	4u7	-	-
Rk49	5k6	-	-
Rk55	1R8	1R8	1R5
Rs5	1R21	1R5	1R5
Rvert	220R	680R	680R
Pk1	Yes	Yes	No
Pk2	No	No	Yes
F0500	No	No	Yes
Dk9	1N4937	-	-

HH600

VM-MODULE
MODULO VM

PIP MODULE PP600
MODULO PIP

CONTROL UNIT

TUNER
SINTONIZZATORE

VIDEO-IF
IF VIDEO

DECO
DECOD

AD
ANAL/DIGIT

PIP-
PROCESSOR
PIP
PROCESSORE

ICt1
TDA4780

ICs1
TDA8350

ICh1
TDA6111

ICh2
TDA6111

ICh3
TDA6111

CRT_CONN
ZOCCOLO CINESCOPIO

FOCUS
FUOCO

EHT 30kV

TO TUBE AQUADAC

FOCUS AND UG2
POTENTIOMETER

VERT.YOKE
GIOGO VERT

GIOGO ORIZ
HOR.YOKE

AT4043/67A

F0600

ONLY 29" A68EES038X122 TUBE

F0600
GND

ONLY 29" Tubes

FJ1375
only 28" Tubes

CHASSIS FX-SERIE 100 Hz

6611 72 13

LL600

TUNER
SINTONIZZATORE

VHF/UHF 75 OHM

SK1110

IF MODULE
MODULO MEDIA FREQ

MAINS ISOLATED PARTE ISOLATA DALLE RETE

MAINS NON ISOLATED PARTE NON ISOLATA DALLE RETE

DEM.COILS BOBINE DI SMAGNETIZ

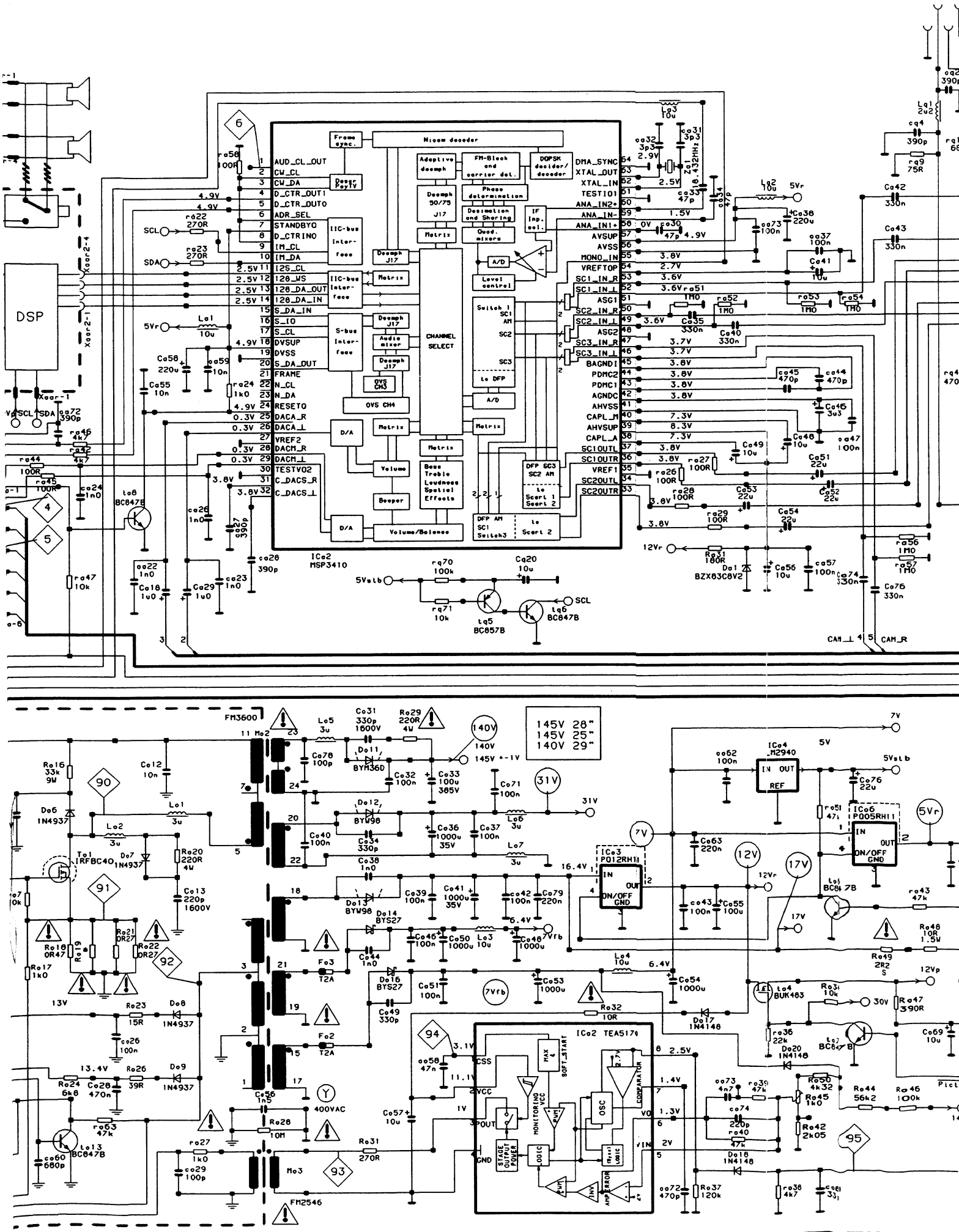
SURR.SP. MODULO SURROUND

AR600

ACTIVE
SUBWOOFER
ATTIVO
AV600

STAND BY (XXXV)

TP88 2H 100mV/div 10µs/div
TP89 2H 2V/div 10µs/div
TP89 SB 1 2V/div 10µs/div
TP89 SB 2 2V/div 1ms/div
TP90 2H 100V/div 10µs/div
TP90 SB 1 100V/div 10µs/div
TP90 SB 2 100V/div 1ms/div
TP91 2H 100mV/div 10µs/div
TP92 SB 2 10V/div 1ms/div
TP93 2H 2V/div 10µs/div
TP94 2H 20mV/div 10µs/div
TP95 2H 5V/div 10µs/div


DSP
ICa2 MSP3410
AUD_CL_OUT
CW_CL
CW_DA
D_CTR_OUT1
D_CTR_OUT0
ADR_SEL
STANDBYO
D_CTRINO
IM_CL
IM_DA
I2S_CL
I2S_WS
I2S_DA_OUT
I2S_DA_IN
S_DA_IN
S_IO
S_CL
DVSUP
DVSS
S_DA_OUT
FRAME
N_CL
N_DA
RESETQ
DACA_R
DACA_L
VREF2
DACM_R
DACM_L
TESTVO2
C_DACS_R
C_DACS_L
DMA_SYNC
XTAL_OUT
XTAL_IN
TEST101
ANA_IN2+
ANA_IN-
ANA_IN1+
AVSUP
AVSS
MONO_IN
VREFTOP
SC1_IN_R
SC1_IN_L
ASG1
SC2_IN_R
SC2_IN_L
ASG2
SC3_IN_R
SC3_IN_L
BAGND1
PDMC2
PDMC1
AGNDC
AHVSS
CAPL_M
AHVSUP
CAPL_A
SC1OUTL
SC1OUTR
VREF1
SC2OUTL
SC2OUTR
Nicam decoder
Frame sync.
Adaptive deemph
FM-Block and carrier del.
DQPSK decoder/ decoder
Deemph 50/75 J17
Phase determination
Deemphasis and Shaping
Quad. mixers
IF Inp. sel.
Matrix
A/D
Level control
CHANNEL SELECT
Switch 1 SC1 AM
SC2
SC3
to DFP
Audio mixer
OVS CH3
OVS CH4
D/A
Volume
Bass Treble Loudness Spatial Effects
Beeper
Volume/Balance
DFP SC3 SC2 AM
to Scart 1 Scart 2
DFP AM SC1 Switch3
to Scart 2
IIC-bus Interface
S-bus Interface
5Vstb
12Vr
SCL
SDA
CAM_L
CAM_R
FM3600
ICa2 TEA5170
ICa3 PO12RH11
ICa4 M2940
ICa6 P005RH11
145V 28"
145V 25"
140V 29"
140V
145V +-1V
31V
16.4V
6.4V
13V
13.4V
7V
5V
12V
17V
30V
400VAC
FM2546

SCART2

SCART1

Xq4-6

Xq4-1

5Vstb

5Vr

12Vr

12Vp

8Vp

8V

7V

17V

12V

5V

30V

140V

ICq1 TEA6417

BUS DECODER

COMB_FILTER

S-VHS

DELAY

COMB

CVBS 4xFsc

BYPASS

Icd3 TDA4665

ICd1 TDA9141

ICr3 SDA30C163_68

ICr1 27C2001

1Mx8 EPROM

Icr2 24LC16

ICo4 LM2940

ICo6 P005RH11

S-VHS-CONN. CONNETTORE S_VHS

Rec-on

Plct-on

CAM_L

CAM_R

CAM_Y

CAM_C

AUD (5:0)

M3L (2:0)

AXR (19:0)

IF (4:0)

SDA

SCL

4

5

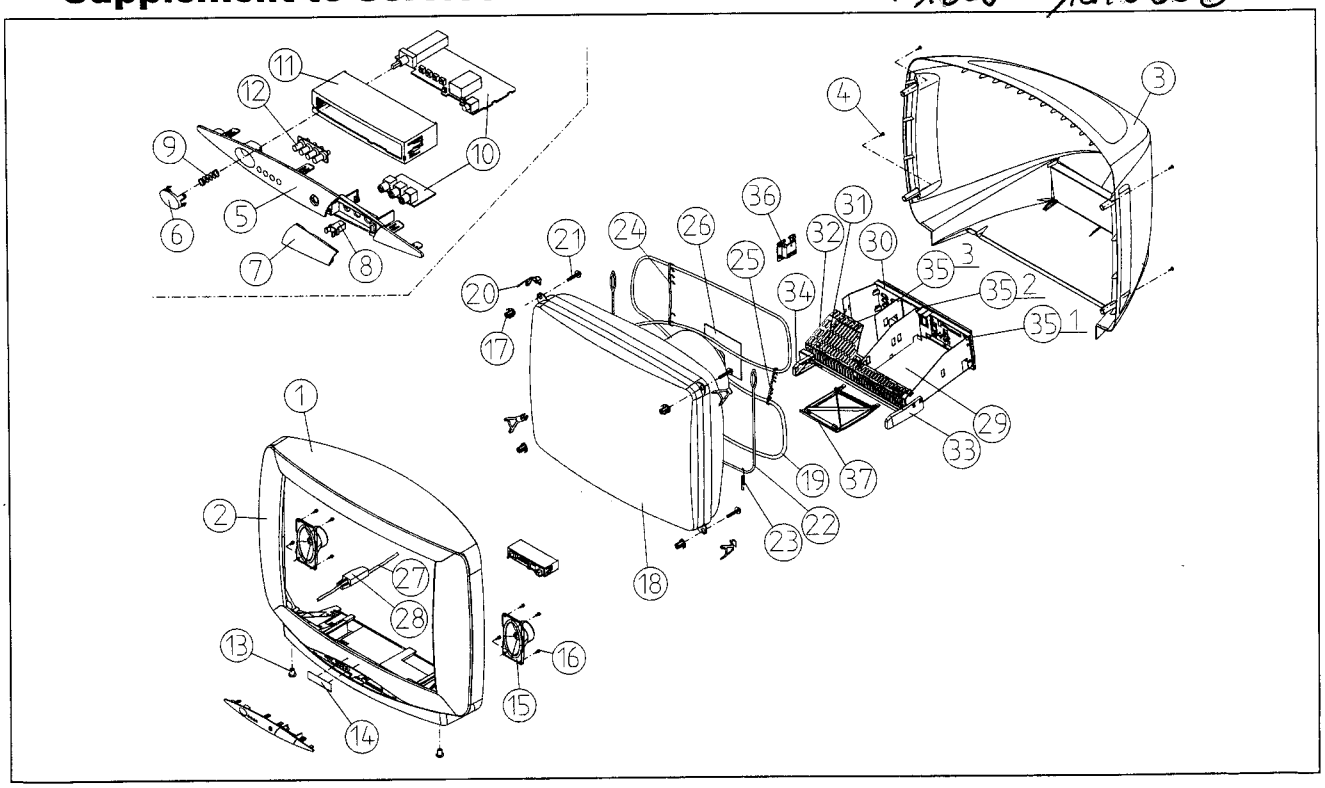
FEATURE STEREO
FX-CHASSIS

ITT -01723

TV
1996

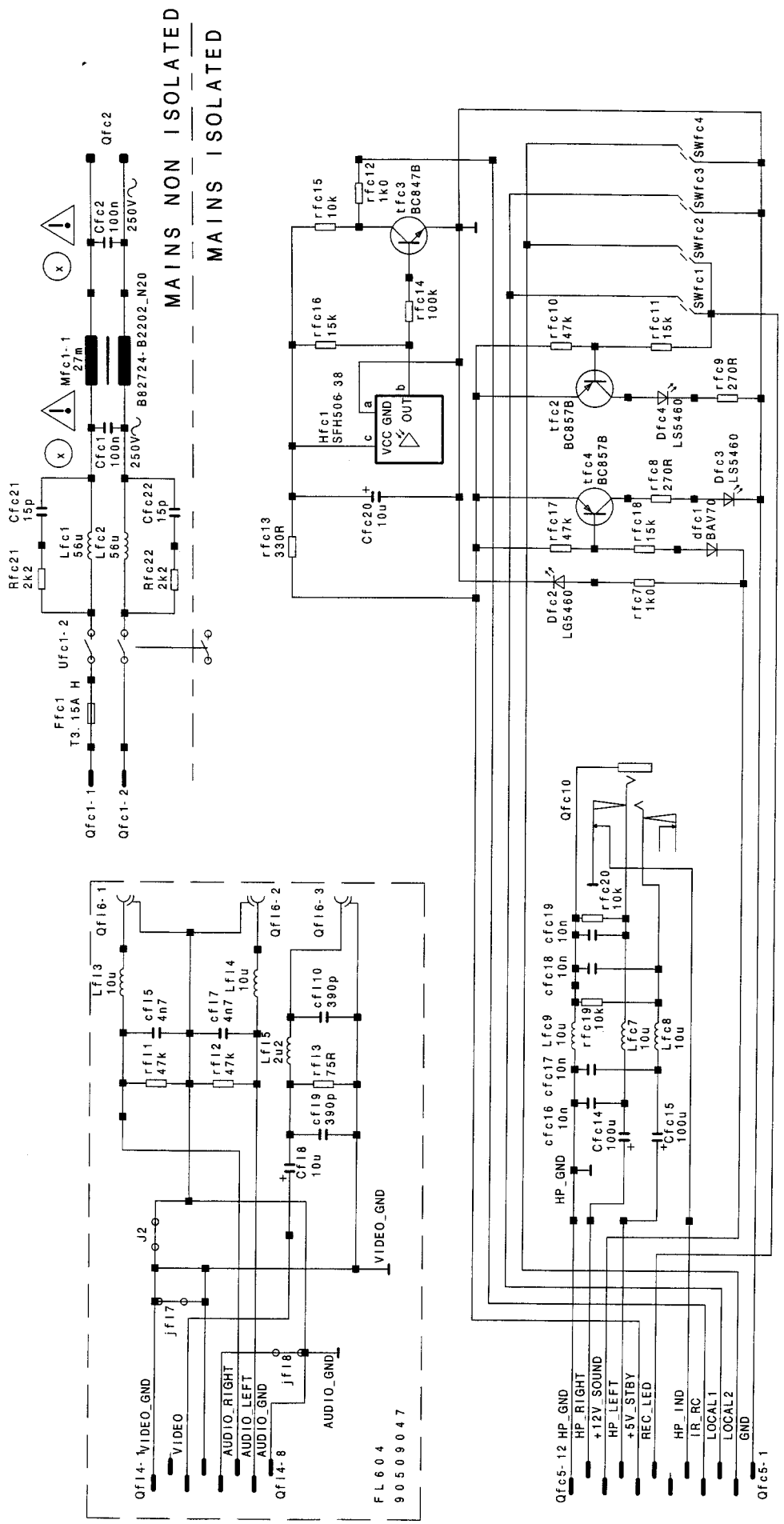
NOKIA 6398 7198

Supplement to Service manual 6611 72 18 +1609 ⇒ 1016056

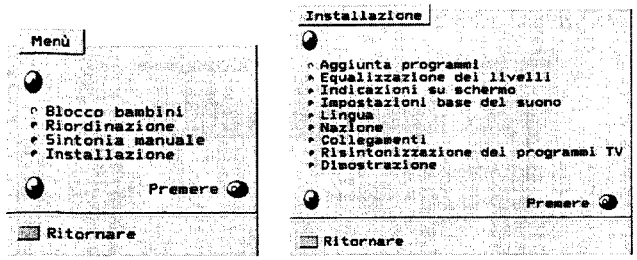


Item	Description	Order no.
01	Cabinet 25 L1 Matt Digi Black	84400660
01	Cabinet 28 L1 Matt Digi Black	84400650
02	Grill right 25 L1 Matt Digi Black	84602670
	Grill left 25 L1 Matt Digi Black	84602680
	Grill right 28 L1 Matt Digi Black	84602650
	Grill left 28 L1 Matt Digi Black	84602660
03	Back cover F2 29 Mat.Digi Black	61355219
03	Back cover L1 25 Matt.Digi Black	84302860
04	Pt-screw KB 40X20	61572700
05	Lens L1 FX assy (*)	86817499
	Lens L1 FX (*)	86817501
	Connector label FX-L1 flap (*)	66416155
06	Mains button L1 (lens with flap) (*)	84680450
07	Flap L1 100Hz (*)	61345428
08	Lock F/V-2 (*)	86815361
09	Spring (*)	73525407
10	Local control module L1	58631094
11	Control unit frame	84480981
12	Key pad control unit L1	41881600
13	Foot pad	86815383
14	Badge Nokia 51mm	84700120
15	Speaker LPB713/19/65	43119591
16	Pt-screw KB 40X10	61572699
17	Picture Tube Holder	84480810
18	Picture tube Vid A59EDN43X10 100Hz	43629031
18	Picture tube Vid A66EDN43X10 100Hz	43629030
19	Degaussing coil 25 Orega	45168819
19	Degaussing coil 28 Orega	45168817
20	Degaussing coil holder	61572685

Item	Description	Order no.
21	Pt-screw K70X30	78640221
22	Grounding braid 25 100hz	61418808
22	Grounding braid 28 100hz	61418807
24	Demacoil holder long	86815357
25	Degaussing coil holder	86815358
26	Crt module 100Hz	69134643
27	Mains cable 2,25m	41314336
28	Strain relief	86817343
29	Main board 100Hz 4:3	58631095
30	Rear plate 3 (AR602/——)	86817502
31	Touch protection 100/50HZ	86817463
32	Add. touch protection 100Hz	86815352
33	Chassis holder left 100/50Hz	86815359
34	Chassis holder right 100Hz	86815360
35	Connecting piece 100/50Hz	86817349
36	Connecting plate 1/2+4 heatsinks	86817462
37	Protection For Main Board	86815353
	Grounding spring	73584891
	Lead lock	61572414
	Feature box module	69134645
	Remote control Nokia	56522347
	Connector module	58631096
	If-module B/G,DK,I,L,L'	58258838
	140V Switch	69134646
	Remote control module	58631097
	Loudspeaker wire bundle	48899816
	Wire bundle PK/K	41314386
	Wire bundle PK/Z 25"	48899817
	Wire bundle PK/Z 28"	48899818
	Antenne cable 2.0m with ferrite	47780002


MAINS NON ISOLATED
MAINS ISOLATED
Qfc2
Cfc2 100n 250V~
Mfc1-1 27m
B82724-B2202_N20
Cfc1 100n 250V~
Cfc21 15p
Cfc22 15p
Lfc1 56u
Lfc2 56u
Rfc21 2k2
Rfc22 2k2
Ufc1-2
Ffc1 T3.15A H
Qfc1-1
Qfc1-2
rfc15 10k
rfc12 1k0
tfc3 BC847B
rfc14 100k
rfc16 15k
Hfc1 SFH506-38
VCC GND OUT
Cfc20 10u
rfc13 330R
rfc10 47k
rfc11 15k
SWfc1
SWfc2
SWfc3
SWfc4
tfc2 BC857B
tfc4 BC857B
rfc9 270R
Dfc4 LS5460
rfc8 270R
Dfc3 LS5460
rfc17 47k
rfc18 15k
dfc1 BAV70
Dfc2 LG5460
rfc7 1k0
Qfc10
rfc20 10k
cfc19 10n
cfc18 10n
Lfc9 10u
cfc17 10n
cfc16 10n
rfc19 10k
Lfc7 10u
Lfc8 10u
Cfc14 100u
Cfc15 100u
HP_GND
Qfl6-1
Qfl6-2
Qfl6-3
Lfl3 10u
cfl5 4n7
cfl7 4n7
Lfl4 10u
rfl1 47k
rfl2 47k
Lfl5 2u2
cfl10 390p
rfl3 75R
cfl9 390p
Cfl8 10u
VIDEO_GND
J2
jfl7
jfl8
AUDIO_GND
Qfl4-1
Qfl4-8
VIDEO
AUDIO_RIGHT
AUDIO_LEFT
AUDIO_GND
FL604
90509047
Qfc5-12
Qfc5-1
HP_GND
HP_RIGHT
+12V_SOUND
HP_LEFT
+5V_STBY
REC_LED
HP_IND
IR_RC
LOCAL1
LOCAL2
GND

A menu



Selezione della lingua

1. Premere il tasto MENU.
2. Selezionare INSTALLAZIONE tramite il tasto cursore (su/giù) e premere il tasto OK.
3. Selezionare LINGUA) e premere il tasto OK.
4. Selezionare la lingua desiderato e premere il tasto OK.
5. Premere il tasto TV.

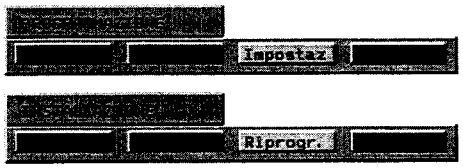
Sintonia manuale

1. Selezionare il numero programma che si desidera sintonizzare.
2. Premere il tasto MENU.
3. Selezionare SINTONIA MANUALE e premere il tasto OK.
4. Avviare la ricerca canali premendo il tasto rosso.
5. Memorizzare le impostazioni premendo il tasto OK.
6. Ritornare alla normale ricezione TV premendo il tasto TV.

APSi

1. Premere il tasto MENU.
2. Selezionare INSTALLAZIONE e premere il tasto OK.
3. Selezionare RISINTONIZZAZIONE DEI PROGRAMMI TV e premere il tasto OK.
4. Avviare la ricerca canali premendo il tasto rosso.
5. Ritornare alla normale ricezione TV premendo il tasto TV.

B menu



Selezione della lingua

1. Premere il tasto PRG.
2. Premere il tasto azzurro per selezionare Install.
3. Premere il tasto rosso per selezionare Lingua (Language).
4. Selezionare la lingua desiderato tramite il tasto cursore (su/giù) e premere il tasto OK.
5. Premere il tasto TV.

Sintonia manuale

1. Premere il tasto PRG.
2. Premere il tasto rosso (Sintonia).
3. Premere il tasto rosso (Ricerca).
4. Selezionare il numero del programma.
5. Premere il tasto azzurro (Memoria).
6. Ritornare alla normale ricezione TV premendo il tasto TV.

APSi

1. Premere il tasto PRG.
2. Premere il tasto azzurro (Install.).
3. Premere il tasto giallo (Riprog.).
4. Premere il tasto rosso (APSi).
5. Premere il tasto verde (Riprog.).
6. Premere il tasto azzurro (OK) per uscire.

NVRAM (ICf2)

Installazione della NVRAM

La memoria NVRAM deve essere inizializzata e configurata nel caso in cui venga sostituita oppure tutti i dati in essa contenuti siano andati perduti. La procedura di seguito riportata presume che l'apparecchio TV non si avvii affatto a causa di dati errati presenti nella memoria NVRAM.

1. Portare l'apparechio in modo di servizio accendendolo con l'interruttore di rete ed, entro 5 secondi, premendo i tasti "MENU" "TV" e "i" in sequenza.
   Nota: Il televisore è in modo servizio anche se sembra essere in stand-by.
2. Premere il tasto rosso per preconfigurare l'apparecchio TV. Al termine della preconfigurazione, l'indicatore verde lampeggerà una volta.

3a Contemporaneamente l'unità di controllo verificherà la memoria NVRAM e la inizializzerà automaticamente qualora risulti "vuota". La procedura di inizializzazione durerà circa 15 secondi. Una volta terminata tale procedura, si accenderà l'indicatore verde.
Proseguire con il punto 4.

3b Se l'indicatore verde non si accende a luce fissa, l'inizializzazione automatica non ha avuto luogo. In alcuni casi, l'indicatore verde potrebbe anche accendersi subito dopo la configurazione, senza che abbia avuto luogo alcuna procedura di inizializzazione, a seconda del contenuto della memoria NVRAM. In tal caso, potrebbe essere sufficiente memorizzare la nuova configurazione premendo il tasto "OK" e proseguire con il punto 4.

3c Se l'inizializzazione automatica non ha avuto luogo, è possibile avviarla automaticamente immettendo il codice chiave, premendo in sequenza i seguenti tasti: BLU, 2,5 e 4. La procedura di inizializzazione durerà circa 15 secondi.

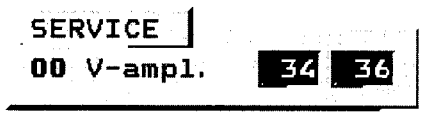
4. Spegnere l'apparecchio tramite l'interruttore di rete.
5. Portare l'apparechio in modo di servizio accendendolo con l'interruttore di rete ed, entro 5 secondi, premendo i tasti "MENU" "TV" e "i" in sequenza.
   Se l'apparecchio rimane in stand-by premere due volte il tasto TV e poi il tast "i".
6. Configurare l'appareccio premendo il tasto rosso. Sullo schermo apparirà il menu configurazione.
7. Premere il tasto OK.
8 Premere il tasto TV e sintonizzare uno o più canali.
9 Tornare al modo manutenzione premendo il tasto "i".
10. Effettuare tutte le regolazioni di servizio (Vedere "REGOLAZIONI DI SERVIZIO TRAMITE IIC BUS").
11. Spegnere l'apparecchio tramite l'interruttore di rete.

REGOLAZIONI DI SERVIZIO

SELEZIONE DEL MODO SERVIZIO

1. L'impostazione del modo servizio avviene accendendo il ricevitore tramite l'interruttore generale e premendo in sequenza i tasti del telecomando MENU, TV e i entro 5 secondi.

Nota: Se il ricevitore rimane in standby dopo aver selezionato il modo servizio, accendere l'apparecchio TV premendo due volte il tasto TV e selezionare il modo servizio premendo il tasto i.



Quando il ricevitore è in modo servizio, viene visualizzato sullo schermo un menu delle regolazioni (indicante anche il nome ed il numero di ciascuna regolazione, i valori di inizializzazione (sinistra) e regolazione (destra)).

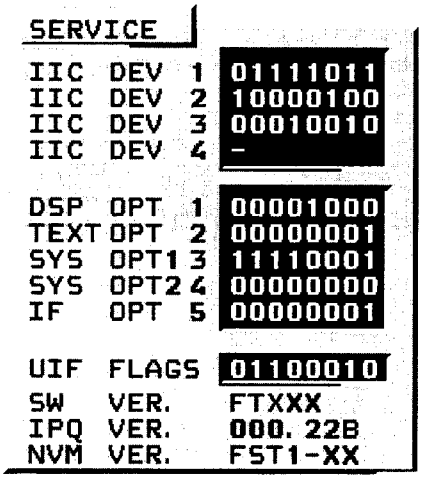
2. Per uscire dal modo servizio, spegnere il ricevitore tramite l'interruttore generale.

CONFIGURAZIONE E DIAGNOSTICA

L'apparecchio TV deve essere configurato qualora si aggiungano o si eliminino delle opzioni. Premendo il tasto rosso in modo servizio, il processore controlla tutti gli indirizzi possibili dei circuiti con bus e visualizza le impostazioni sullo schermo. Questa funzione può aiutare la ricerca dei difetti; se un Bit Opzione non si trova a "1" quando dovrebbe esserlo, il circuito integrato relativo, o non è presente, oppure è difettoso. Nel menu configurazione è possibile attivare/disattivare i Bit di opzione a scopo di controllo.

Modifica dei bit di opzione

1. In modo servizio, selezionare il modo configurazione premendo il tasto rosso.



Descrizione
SW VER. = Versione software µP.
IPQ VER. = Versione software µP Feature box.
NVM VER. = Versione software NVM.

2. Selezionare IIC Device byte 1 - 4 oppure Option byte 1 - 5 tramite i tasti cursore (su/giù). Il byte selezionato compare evidenziato sullo schermo.
3. Impostare i bit tramite i tasti numerici (da 0 a 7).
4. Memorizzare le impostazioni premendo il tasto OK.
5. Tornare al modo servizio premendo di nuovo il tasto rosso.

DESCRIZIONI DEI BYTE DI OPZIONE

Bit Opzioni inseriti automaticamente:

Bit	Descrizione	Impostazione '1'	'0'
	7 6 5 4 3 2 1 0		
	IIC DEV 1 01111011		
0	Sintonizzatore TV	Sì	No
1	Decodificatore TDA9141	Sì	No
3	Controllore feature box (IPQ)	Sì	No
4	Controllore deflessione TDA9151	Sì	No
5	Processore RGB TDA4780	Sì	No
6	Interruttore video TDA6417	Sì	No
7	Controllore PIP SDA9188	Sì	No
	IIC DEV 2 10000100		
0	PIP tuner	Sì	No
2	Megatext SDA5273	Sì	No
7	MSP3400 / 3410	Sì	No
	IIC DEV 3 00010010		
0	DPL (AR600)	Sì	No
1	Subwoofer	Sì	No
4	Filtro Comb (SVHS a bassa linea)	Sì	No
6	DPL (AR602)	Sì	No
	DSP OPT 1 00001000		
0-2	Configurazione altoparlanti (modo utente)		
4	Sdoppiamento bassi	Sì	No
6	Pre-equalizzazione altoparlanti surround DSP	Sì	No
	TXT OPT 2 00000001		
0	TXT con RAM esterna	Sì	No
2	Flof text abilitato (manuale)	Sì	No
4	Modo di sincronizz. txt (manuale)	Sì	No
5	Scorrimento subpagine televideo (manuale)	Sì	No
	SYS OPT 1 11110001		
0	Connettore camera installato (manuale)	Sì	No
3	RGB E1	Sì	No
4	NTSC 3.58 MHz	Sì	No
5	ACI abilitato (manuale)	Sì	No
6	NICAM abilitato (manuale)	Sì	No
7	Loudness abilitato (manuale)	Sì	No
	SYS OPT 2 00000000		
0	Accensione del TV con l'interruttore	No	Si
6	Accensione del TV in modo demo (manuale)	Si	No
7	Funzioni hotel abilitate (manuale)	Sì	No
	IF OPT 5 00000001		
0	Sistema B/G	Sì	No
1	Sistema I	Sì	No
2	Sistema D/K	Sì	No
3	Sistema L/L'	Sì	No
5	Banda base	Sì	No
7	Solo sintonizzatore UHF	Sì	No
	UIF FLAGS 01100010		
4	Opzione OEM	Sì	No

REGOLAZIONI DI SERVIZIO TRAMITE BUS IIC

Uso del telecomando nel modo servizio

Quando si è in modo servizio, è possibile passare al normale modo TV premendo il tasto TV sul telecomando ed eventualmente tornare al modo servizio premendo il tasto i, sempre sul telecomando.
Le regolazioni di servizio vengono effettuate tramite i tasti numerici ed i tasti cursore. Il tasto giallo nasconde temporaneamente il menu di servizio, mentre il tasto OK memorizza le impostazioni.

Regolazione per un diverso formato immagine

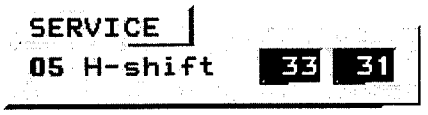
Effettuare prima tutte le regolazioni necessarie con il formato immagine 4:3 normale. L'apparecchio TV utilizza questi valori per tutti i formati immagine se non sono state effettuate altre regolazioni. Per ciascuna regolazione viene specificato se deve essere effettuata separatamente per un diverso formato immagine, nel qual caso ripetere soltanto le regolazioni che interessano.

Come effettuare le regolazioni di servizio

1. Immettere tramite i tasti numerici il codice a due cifre relativo alla regolazione che si desidera effettuare (ad esempio, 05 = fase orizzontale; fare riferimento alle tabelle di seguito riportate).

Nota: *Le regolazioni possono essere selezionate anche tramite i tasti cursore (su/giù).*

2. Effettuare la regolazione tramite i tasti cursore (destra/ sinistra).



3. Memorizzare i nuovi valori premendo il tasto OK.

Nota:
- *Per evitare regolazioni incomplete, si consiglia di memorizzare ciascuna regolazione immediatamente dopo averla effettuata.*
- *Se una regolazione deve essere effettuata separatamente per un diverso formato immagine, selezionare il normale modo utente premendo il tasto TV e modificare il formato immagine tramite il tasto zoom. Tornare al modo servizio premendo il tasto i.*

REGOLAZIONI VERTICALI DELL'IMMAGINE

Regolazione	Codice	Display	Valore iniz.	Nota:
Ampiezza verticale Ampiezza verticale 16:9 Ampiezza verticale 16:9 zoom	00	V-ampl.	34	Regolare l'altezza dell'immagine sul rapporto corretto. *Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Spostamento centratura verticale	01	V-shift	4	
Inizio scansione verticale	02	V-start	0	
Correzione-S verticale Correzione-S verticale16:9 Correzione-S verticale 16:9 zoom	03	S-corr.	49	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Pendenza verticale 4:3 zoom (approssimata) Pendenza verticale 4:3 zoom (fine)	12 13	Zoom-H Zoom-L	71 0	Selezionare il formato immagine 4:3 zoom e regolare l'immagine sul rapporto corretto.
Valore centratura, spostamento 4:3 zoom (V-wait)	14	Shift	23	*Nota: Prima di effettuare la regolazione, selezionare il formato immagine 4:3 zoom.*

REGOLAZIONI ORIZZONTALI DELL'IMMAGINE

Regolazione	Codice	Display	Valore iniz.	Nota:
Larghezza EW	04	Width	42	
Fase orizzontale Zoom fase H RGB fase H Zoom RGB fase H	05	H-shift	33	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale e 4:3 zoom.* *Inoltre, effettuare le stesse regolazioni usando il segnale RGB.*
Parabola EW Parabola EW 16:9 Parabola EW 16:9 zoom	06	Parab.	24	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Angolo EW Angolo EW16:9 Angolo EW 16:9 zoom	07	Corner	25	*Nota: Effettuare regolazioni separate per i formati immagine 4:3 normale, 16:9 normale e 16:9 zoom.*
Trapezoidale EW	08	Trapezium	5	
Compensazione EHT	09	EHT	6	Impostare luminosità e contrasto a 90% e modificare di conseguenza la dimensione dell'immagine.

ALTRE REGOLAZIONI

Regolazione	Codice	Display	Valore iniz.	Note!
Riferimento rosso	20	R ref.	52	*Nota: Questa procedura è necessaria quando si sostituisce il cinescopio, il modulo CRT etc.*
Riferimento verde	21	G ref.	21	
Riferimento blu	22	B ref.	16	*Collegare un segnale test e regolare i riferimenti di R, G e B*
Guadagno rosso	17	R gain	41	*Regolare il guadagno di R, G e B.*
Guadagno verde	18	G gain	32	
Guadagno blu	19	B gain	32	
Spostamento aggancio	11	Clamp	3	Regolazione generalmente non necessaria.
Limite picco bianco	23	PWL	63	Regolazione generalmente non necessaria.
Correzione gamma	24	GAMMA	32	Regolazione generalmente non necessaria.
Sintonizzatore AGC	25	TV AGC	170	Applicare un segnale di test 1 mV (60 dBµV). Regolare al meglio l'immagine.

REGOLAZIONI DI SERVIZIO

O BLOCCO ALIMENTATORE

Circuito di protezione dell'alimentatore

1. Regolare la luminosità ed il contrasto sui valori normali. Collegare un voltmetro universale al catodo di Do11.
2. Regolare con Ro45 la tensione DC di +140 V ±1 V (oppure +145 V ±1 V dipende dal tipo di cinescopio, vedere schema elettrico).
3. Controllare sempre la protezione alle sovracorrenti dopo aver effettuato qualsiasi operazione di servizio sul circuito primario dell'alimetazione. Per controllarla procedere come segue:
   Portare l'apparecchio in stand-by.
   Cortocircuitare il catodo del Do13 a massa e mantenere il corto circuito. Se la protezione alle sovracorrenti lavora correttamente, l'alimentatore cercherà di partire per 2/3 volte prima di bloccarsi definitivamente.
   Togliere il corto circuito e accendere l'apparecchio dall'interruttore di rete.

K BLOCCO DEFLESSIONE ORIZZONTALE

Linearità orizzontale

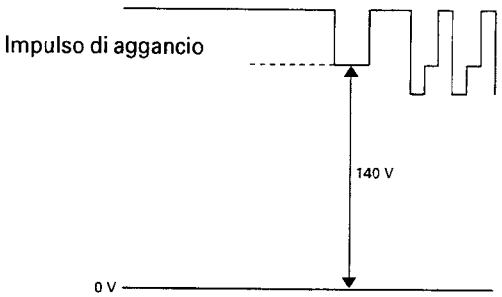
Regolare con Lk2.

Messa a fuoco

Regolare la luminosità ed il contrasto sui valori normali. Utilizzando un quadro di test, regolare l'immagine fino ad ottenere il livello di risoluzione ottimale.

Tensione di griglia schermo

1. Regolare il contrasto sul valore minimo e la luminosità e la saturazione colore sui valori normali.
2. Con un oscilloscopio controllare l'ampiezza degli impulsi di aggancio del livello del nero inserito (Inserted black level) per la durata di 3 righe dopo lo spegnimento verticale su ICh1 piedino 9, ICh2 piedino 9 e ICh3 piedino 9.
3. Con Ug2 regolare a +140 V l'ampiezza dell'impulso di aggancio più alto (vedere figura).



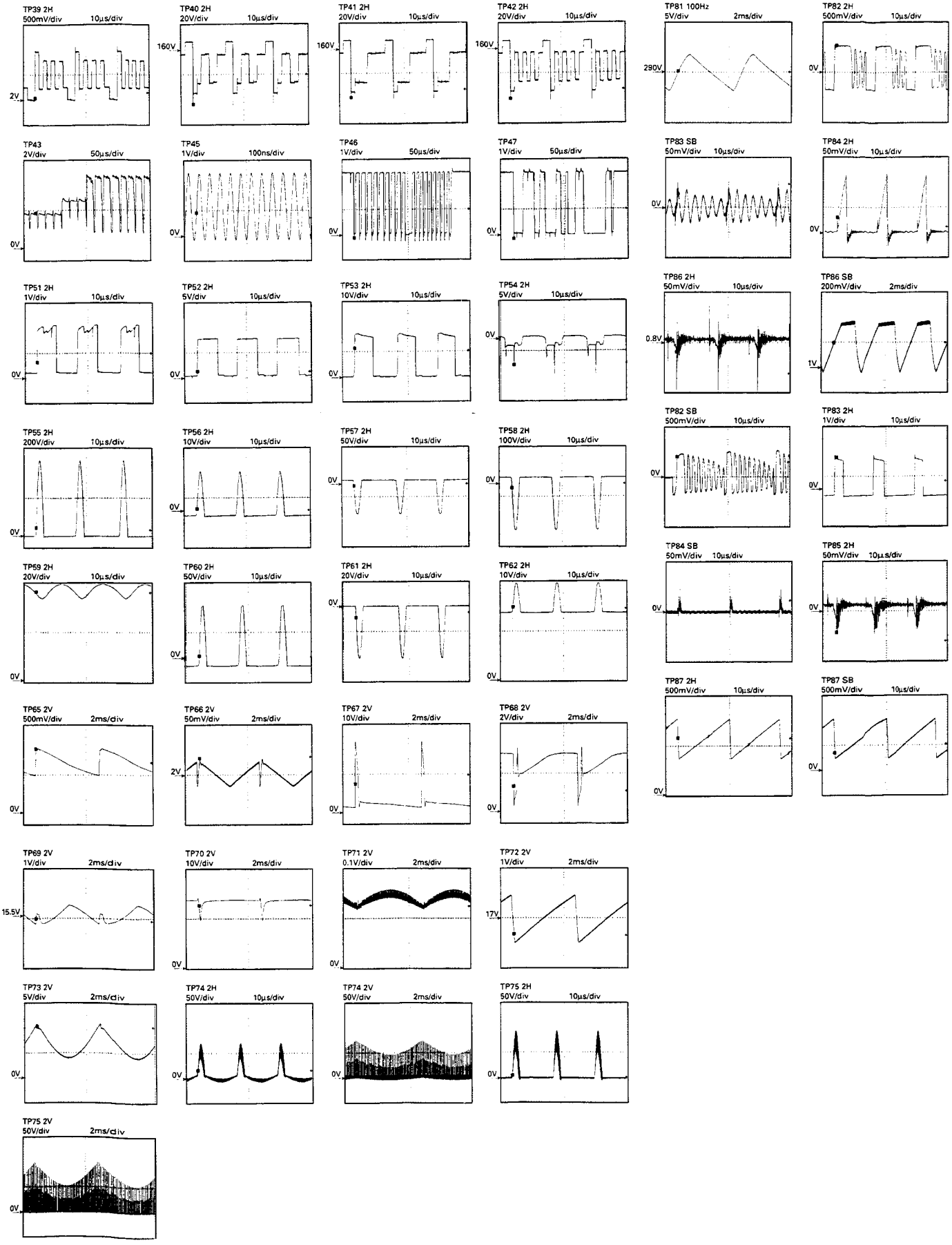
LL MODULO FI VIDEO E AUDIO

Demodulatore video

1. Applicare un segnale di test (1 mV = 60 dBµV).
2. Collegare un voltmetro universale al connettore del modulo X1 piedino 6.
3. Regolare con LI6 la tensione cc fino sul punto in cui passa da 0 a 5 V.

Demodulatore audio

1. Applicare un segnale di test CCIR B/G standard (suono modulato FM).
2. Collegare un voltmetro universale a ICI1 piedino 13.
3. Regolare con LI1 la tensione cc a +3.7 V.


TP39 2H
500mV/div 10µs/div
2V
TP40 2H
20V/div 10µs/div
160V
TP41 2H
20V/div 10µs/div
160V
TP42 2H
20V/div 10µs/div
160V
TP81 100Hz
5V/div 2ms/div
290V
TP82 2H
500mV/div 10µs/div
0V
TP43
2V/div 50µs/div
0V
TP45
1V/div 100ns/div
0V
TP46
1V/div 50µs/div
0V
TP47
1V/div 50µs/div
0V
TP83 SB
50mV/div 10µs/div
0V
TP84 2H
50mV/div 10µs/div
0V
TP51 2H
1V/div 10µs/div
0V
TP52 2H
5V/div 10µs/div
0V
TP53 2H
10V/div 10µs/div
0V
TP54 2H
5V/div 10µs/div
0V
TP86 2H
50mV/div 10µs/div
0.8V
TP86 SB
200mV/div 2ms/div
1V
TP55 2H
200V/div 10µs/div
0V
TP56 2H
10V/div 10µs/div
0V
TP57 2H
50V/div 10µs/div
0V
TP58 2H
100V/div 10µs/div
0V
TP82 SB
500mV/div 10µs/div
0V
TP83 2H
1V/div 10µs/div
0V
TP59 2H
20V/div 10µs/div
0V
TP60 2H
50V/div 10µs/div
0V
TP61 2H
20V/div 10µs/div
0V
TP62 2H
10V/div 10µs/div
0V
TP84 SB
50mV/div 10µs/div
0V
TP85 2H
50mV/div 10µs/div
0V
TP65 2V
500mV/div 2ms/div
0V
TP66 2V
50mV/div 2ms/div
2V
TP67 2V
10V/div 2ms/div
0V
TP68 2V
2V/div 2ms/div
0V
TP87 2H
500mV/div 10µs/div
0V
TP87 SB
500mV/div 10µs/div
0V
TP69 2V
1V/div 2ms/div
15.5V
TP70 2V
10V/div 2ms/div
0V
TP71 2V
0.1V/div 2ms/div
0V
TP72 2V
1V/div 2ms/div
17V
TP73 2V
5V/div 2ms/div
0V
TP74 2H
50V/div 10µs/div
0V
TP74 2V
50V/div 2ms/div
0V
TP75 2H
50V/div 10µs/div
0V
TP75 2V
50V/div 2ms/div
0V

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